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Report No. 09-INTEL-11
September 18, 2009

DEPUTY INSPECTOR GENERAL FOR INTELLIGENCE

**Status of Recommendations to Improve
the Air Force Nuclear Enterprise**

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Acronyms and Abbreviations

A10	Strategic Deterrence and Nuclear Integration
ACC	Air Combat Command
AFB	Air Force Base
BRR	Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures
CATIK	Cruise Missile Test Instrumentation Kits
CDI	Commander Directed Report of Investigation Concerning an Unauthorized Transfer of Nuclear Warheads between Minot AFB, North Dakota and Barksdale AFB, Louisiana
DSB	Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons
IG	Inspector General
MASO	Munitions Accountable Systems Officer



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September 18, 2009

MEMORANDUM FOR DISTRIBUTION:

SUBJECT: Status of Recommendations to Improve the Air Force Nuclear Enterprise
(Report No. 09-INTEL-11)

We are providing this report for your review. This review was conducted, in part, in response to an April 18, 2008, Congressional request from Senator Carl Levin and Senator John McCain of the Senate Armed Services Committee to report on the Air Force's implementation of the recommendations contained in the Commander Directed Report of Investigation Concerning an Unauthorized Transfer of Nuclear Warheads Between Minot AFB, North Dakota and Barksdale AFB, Louisiana, August 30, 2007; the Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons, February 8, 2008; and the Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures, February 8, 2008.

No written response to this report is required. We have included updated information received from the Air Force A10, Strategic Deterrence and Nuclear Integration Directorate; the Global Strike Command; and the Air Combat Command. We considered management comments on a draft of this report when preparing the final report. The complete text of the Global Strike Command's comments is in the Management Comments section of the report.

We appreciate the courtesies extended to the staff. Please direct questions to the Deputy Assistant Inspector General for Intelligence Audits at (703) 604-8815 (DSN 664-8815) or the Project Manager at (703) 604-8965 (DSN 664-8965).

A handwritten signature in black ink, reading "Patricia A. Brannin", is positioned above the printed name.

Patricia A. Brannin
Deputy Inspector General
for Intelligence

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COMMANDER, 8TH AIR FORCE
COMMANDER, 5TH BOMB WING
COMMANDER, 509TH BOMB WING



Results in Brief: Status of Recommendations to Improve the Air Force Nuclear Enterprise

What We Did

This report is one of a multi-phased approach to respond to concerns raised by Senator Levin and Senator McCain in an April 18, 2008, letter to the DoD Inspector General. The concerns were raised because:

- six nuclear delivery vehicles with nuclear warheads were mistakenly transported from Minot Air Force Base to Barksdale Air Force Base; and
- nuclear weapons related material was shipped to Taiwan instead of helicopter batteries.

We determined the status of actions taken to implement the recommendations, which generally addressed the bomber portion of the Air Force Nuclear Enterprise, in the following reports that were commissioned to address the incident involving the unauthorized movement of nuclear weapons.

- Air Combat Command Directed Investigation;
- Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons; and
- Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures.

What We Found

The U.S. Air Force is addressing all recommendations in the three reports. The Air Force closed 74 of the 107 unclassified recommendations identified in our review, which include two recommendations that they determined were not feasible to implement.

The Air Force is making progress in re-invigorating its nuclear weapons enterprise.

Key actions include:

- two new command structures, the A10, Strategic Deterrence and Nuclear Integration Directorate and the Global Strike Command were established with General Officer resident leadership;
- dedicated wing and squadron with a primacy in strategic nuclear operations;
- procedures for handling, movement, and maintenance of nuclear weapons from storage to actual vehicle attachment have been reviewed and revised; and
- increased emphasis on nuclear maintenance and management has been added to training curriculums for all levels from junior enlisted to general officer.

However, the momentum generated by the intense public scrutiny, DoD emphasis, and Congressional oversight will not be sustained unless key funding decisions are continued, and personnel and technical resources are allocated.

What We Recommend

- There are no recommendations.

Management Comments

The Global Strike Command was concerned that the report implied that we reviewed the entire Air Force nuclear enterprise when we only reviewed the bomber portion.

Our Response

We added comments to clarify that our review concentrated on the bomber portion of the Air Force Nuclear Enterprise.

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Introduction

On April 18, 2008, Senator Carl Levin and Senator John McCain of the Senate Armed Services Committee sent a letter to the Inspector General requesting a review of the Air Force's implementation of the recommendations contained in the Commander Directed Report of Investigation Concerning an Unauthorized Transfer of Nuclear Warheads between Minot AFB, North Dakota and Barksdale AFB, Louisiana (CDI), the Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures (BRR), and the Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons (DSB) reports.

Objectives

The objective of this report was to determine the status of actions taken to implement the recommendations contained in the following reports:

- CDI, August 30, 2007;
- BRR, February 8, 2008; and
- DSB, February 8, 2008 (Revised April 2008).

That recommendation generally addressed the bomber portion of the Air Force Nuclear Enterprise. See Appendix A for a discussion of the scope, methodology, and prior coverage.

Background

Two events highlighted the erosion of nuclear mission focus. On August 30, 2007, a B-52H bomber crew mistakenly flew six nuclear delivery vehicles, with warheads, from Minot Air Force Base, North Dakota to Barksdale Air Force Base, Louisiana. In 2006, critical, nuclear-related parts, labeled as helicopter batteries, were mistakenly sent to Taiwan. That event was not discovered until March 2008. As a result of those incidents, the Secretary of Defense and the Secretary of the Air Force ordered a series of reviews and investigations to identify the root-causes that allowed those incidents to occur.

Reports on the Air Force Nuclear Enterprise. As of July 31, 2009, 14 reports were issued on the U.S. Air Force nuclear program. In addition to the three reports included in this review, the following 10 reports were published:

- The Defense Science Board Permanent Task Force on Nuclear Weapons Surety – Report on Unauthorized Movement of Nuclear (hereafter referred to as the DSB), February 2008 (Revised April 2008);
- Nuclear Surety Staff Oversight of US Air Force Nuclear Surety Inspections, April 1, 2008;
- Investigation into the Shipment of Sensitive Missile Components to Taiwan, May 22, 2008;

- Air Force Inventory and Assessment: Nuclear Weapons and Nuclear Weapons-Related Materiel, May 25, 2008
- Air Force Comprehensive Assessment of Nuclear Sustainment, July 26, 2008;
- SECDEF Task Force on DoD Nuclear Weapons Management, September 12, 2008;
- Report of the Defense Science Board Task Force on Nuclear Deterrence Skills, September 2008.
- Air Force Nuclear Task Force (Nuclear Roadmap), October 24, 2008;
- Report of the Defense Science Board Permanent Task Force on Nuclear Weapons Surety on Nuclear Weapons Inspections for the Strategic Nuclear Forces, December 2008
- Comprehensive Assessment of Nuclear Sustainment – II; December 2008; and
- Nuclear Weapons Management, January 8, 2009.

Congressional Testimony. On February 12, 2008, officers of the U.S. Air Force and the President and Chief Executive Officer of the Institute for Defense Analysis testified at a Senate Armed Services Committee hearing, regarding Air Force Nuclear Security program. During the hearing, the witnesses¹ stated that:

- the weapons were secure and always in the hands of America's airmen
- there was a very low risk of plutonium spillage;
- approximately 25 persons did not perform their duties in accordance with Air Force procedures, which resulted in the unauthorized movement of nuclear weapons;
- there was no indicator from deficiencies identified during previous inspections that led to the actual incident itself;
- Air Force personnel could not provide an estimate of how long it would take to implement all the recommendations; however, they were very quickly implementing as many of the recommendations as possible;
- the focus on the nuclear enterprise in the Air Force and the DoD had decreased over time and that the Air Force was putting key senior personnel into key positions; and

¹Lieutenant General Darnell, Deputy Chief of Staff, Air, Space, and Information, Operations, Plans and Requirements; Major General Raaberg, Director for Air and Space Operations, Air Combat Command; and Major General Peyer, Director of Resource Integration, Office of the Deputy Chief of Staff for Logistics, Installation and Mission Support testified for the U.S. Air Force. General Welch; U.S. Air Force [Retired]; President and CEO, Institute for Defense Analyses.

- the Air Staff will have a Major General, two-star, in charge of nuclear matters that reports directly to the U.S. Air Force, Deputy Chief of Staff.

Leadership. The Defense Science Board report criticized the Air Force for “markedly reduced levels of leadership whose daily focus is the nuclear enterprise, and a general devaluation of the nuclear mission and those who perform the mission.” The Air Force’s “Reinvigorating the Air Force Nuclear Enterprise” also stated that the failure of leadership, at many levels, to provide proper emphasis on the continuing nuclear mission was the root-cause for the systemic breakdowns in the Air Force’s nuclear enterprise. The “Reinvigorating the Air Force Nuclear Enterprise” also identified the following causes that led to the systemic breakdown within the Air Force leadership.

- The Air Force lost its focus when the operating environment changed at the end of the Cold War.
- The focus on nuclear operations was further eroded by the profound changes in the security environment following the 9/11 terrorist attacks.
- In 1992, the nuclear enterprise was fragmented when the Air Force implemented the largest organizational change since its inception.
- The 1995 Base Realignment and Closure decisions dispersed depot support for nuclear systems and components, which further fragmented the Air Force’s nuclear sustainment system.
- The Air Force failed to properly resource many nuclear mission areas. As a result, the pool of nuclear experienced Airmen shrunk and nuclear expertise eroded.
- The Air Force’s nuclear enterprise was delegated to a “care-taker” status with limited modernization or recapitalization.
- The Global War on Terror, Operation Enduring Freedom, and Operation Iraqi Freedom further shifted focus and institutional priorities away from the nuclear mission.
- The culture of accountability and rigorous self-assessment in the nuclear enterprise eroded because Air Force leadership failed to advocate, oversee, and properly emphasize the maintenance of nuclear-related skill sets and deficiencies in inspection processes.

Nuclear Enterprise Roadmap. “Reinvigorating the Air Force Enterprise” (Roadmap) is the Air Force’s strategic plan to revitalize the nuclear enterprise to reclaim the trust of the nation and confidence of their allies. The Roadmap identifies a comprehensive set of actions the Air Force believes they must take to overcome documented deficiencies and set the conditions for sustainable excellence across the Air Force nuclear enterprise. The Roadmap focuses on six recurring themes, root-causes, identified in the investigations and internal assessments associated with the movement of nuclear weapons and the shipment of nuclear-related material shipment incidents. The Air Force identified those recurring themes as:

- rebuild a culture of accountability and rigorous self-assessment dedicated to high standards of excellence in the Air Force nuclear enterprise;
- rebuild nuclear expertise and codify career paths;
- construct an end-to-end Air Force nuclear sustainment enterprise system and revitalize the sustainment community;
- develop a comprehensive investment plan committed to meeting the requirements of the nuclear deterrence mission;
- create an environment of sustained advocacy for the nuclear deterrence mission; and
- align authorities and responsibilities for nuclear deterrence mission requirements.

Status of Recommendations

The U.S. Air Force (Air Force) is addressing all 107 of the recommendations contained in the CDI, BRR, and DSB reports. Of the 107 recommendations, the Air Force has completed action to close 74 recommendations, which include two recommendations that they determined were not feasible to implement. Key actions taken include:

- establishing the Air Force A10 - Strategic Deterrence and Nuclear Integration Directorate (A10) and the Global Strike Command;
- instituting and strengthening training curriculums from the junior airman up to the most senior leader;
- establishing nuclear primacy in bomber units; and
- strengthening the inspection process, including no-notice inspections.

Now that the Global Strike Command has been activated (August 7, 2009), the Air Force will be able to take actions to close many of the open recommendations. Key issues the Air Force is still addressing include:

- developing effective recruiting and retention plan to build expertise in the Nuclear program,
- identifying challenges in maintaining qualifications and certifications in units with dual missions, and
- maintaining focus and funding for long term solutions needed in such areas as tracking weapons and life extension programs.

Air Force Reports on the Nuclear Weapons Enterprise

The CDI was the first report issued in the aftermath of the B-52 incident. There were 59 unclassified recommendations and 15 classified recommendations. Of the 59 unclassified recommendations, the Air Force considers 11 recommendations open and 48 recommendations closed.

The BRR was conducted by the Air Force Chief of Staff and reported on the organization structure; command authorities and responsibilities; personnel and assignment policies; and education and training associated with the nuclear enterprise. The report had 37 recommendations. The Air Force considers 21 recommendations open and 16 recommendations closed.

The DSB review was commissioned by the Under Secretary of Defense for Acquisition, Technology, and Logistics and the Commander, U.S. Strategic Command on the B-52 incident involving the unauthorized movement of nuclear weapons. The report had

11 recommendations. The Air Force considers three recommendations open and eight recommendations closed.

Air Force Nuclear Oversight Boards

The newly formed Air Force Nuclear Working Group (Group) has replaced the Air Force Nuclear General Officer Steering Group. The Group is the action arm (O-6 Level) with the responsibility to vet issues regarding such areas as Roadmap Action Plan implementation. The Group reports to the Nuclear Issue Resolution and Integration Board, (General Officer Level), which provides management required to work interdependent of the composite nuclear organization. The Group has met on December 10, 2008 and June 6, 2009.

The Nuclear Issue Resolution and Integration Board tracks the implementation of the Roadmap action plan, validates success of action plan items, and facilitates overall nuclear enterprise integration. The Nuclear Oversight Board (senior leader, 4-Star forum) provides executive oversight and strategic direction to resolve key issues affecting the Air Force nuclear enterprise. Those new boards have the power to implement Air Force-wide nuclear enterprise reforms.

Tracking Recommendations

The Air Force uses the Nuclear Enterprise Management Tool to generate reports showing the progress and status of each recommendation, which included the name of the report the recommendation was reported, percentage of action completed, team lead, office of primary responsibility, status report, person responsible for oversight, and the projected completion date. The Nuclear Enterprise Management Tool also allows the Air Force to track action plans and future metrics.

Recommendations

The recommendations were broken down into five functional areas: (1) organization and resources (2) leadership; (3) mission focus and surety; (4) training and force development; and (5) transportation, accountability, tracking, scheduling, and security. A recommendation may address multiple functional areas; however, it will only be addressed in one functional area. Each recommendation is numbered in Appendix B and that number is used as the recommendation number in this report. Table 1 in the following page identifies the status of the 107 recommendations. See Appendix B for a complete listing of the recommendations and a cross reference of each recommendation to the CDI, BRR, or DSB report.

This report does not address the 15 classified recommendations because they were similar in nature to unclassified recommendations that we reviewed. Eleven of the classified recommendations were closed, three recommendations were open, and one recommendation covered the entire U.S. nuclear community. An asterisk identifies the corresponding unclassified recommendation.

Table 1. Summary of Status for Recommendations

Functional Area	Recommendations Open	Total Open		Recommendations Closed	Total Closed	Total Number of Recommendations
(1) Organization and Resources		5			8	13
Organization	92	1		65, 67, 101, 102, 105	5	6
Resources	79, 83, 94, 95	4		28, 81, 86	3	7
(2) Leaderships	18, 19, 70	3			0	3
(3) Mission Focus and Surety		8			7	15
Mission Focus	75	1		73, 93	2	3
Surety	6, 8*, 17, 66, 71, 89, 100	7		4*, 9, 59, 74, 82	5	12
(4) Training and Force Development		9			28	37
Training	21, 30, 80	3		5, 20, 24, 25, 29, 37, 39, 40, 42, 44, 45, 48, 53, 54, 55, 56, 57, 58*, 76, 77, 78, 107	22	25
Force Development	61*, 62, 63, 72, 103, 106	6		47, 60*, 64, 69, 84*, 104	6	12
(5) TATSS**		8			31	39
Transportation		0		38, 41, 88, 96	4	4
Accountability	35,	1		1*, 22, 23, 26, 27, 31, 32, 85, 97, 98, 99	11	12
Tracking	2, 34	2		3, 87	2	4
Scheduling	33, 36	2		10, 11*, 12*, 13*, 14*, 15, 16, 43, 46, 49, 50, 51, 52	13	15
Security	68, 90, 91	3		7*	1	4
Totals		33			74	107
* Similar to classified recommendations in the CDI report.						
**Transportation, Accountability, Tracking, Scheduling, and Security						

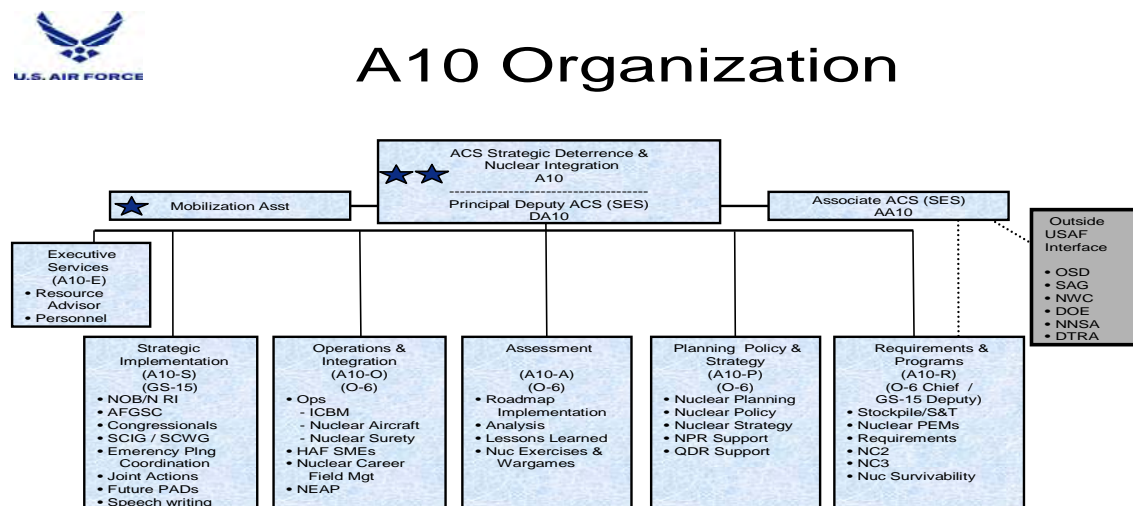
Organization and Resources

Thirteen recommendations addressed organization and resources deficiencies. The Air Force considered eight recommendations open and five recommendations closed. The Air Force determined that they could not implement one and fully implement another of

the closed recommendations; however, they created and activated the Global Strike Command and the Global Deterrence Force, which met the intent of the recommendation.

Organization. Six recommendations, one reported open by the Air Force, addressed the deficiencies in the organization structure of the Nuclear Enterprise. On November 8, 2008, the Headquarters, Air Force established the A10 Directorate, which reports directly to the Air Force Chief of Staff, to resolve the fragmented lines of authority across all levels of the nuclear enterprise. That Directorate is the single Air Force authority for all nuclear-related issues, including nuclear operations, plans, policy, and requirements. The A10 Directorate is headed by an Assistant Chief of Staff that reports directly to the Chief of Staff of the Air Force with authority to drive nuclear enterprise policy, guidance, requirements, and advocacy across the Air Force. The A10 Directorate was still in the process of establishing itself as a fully operational directorate. The following Table was provided by the A10 Directorate.

Figure 1. A10 Directorate Organization Chart

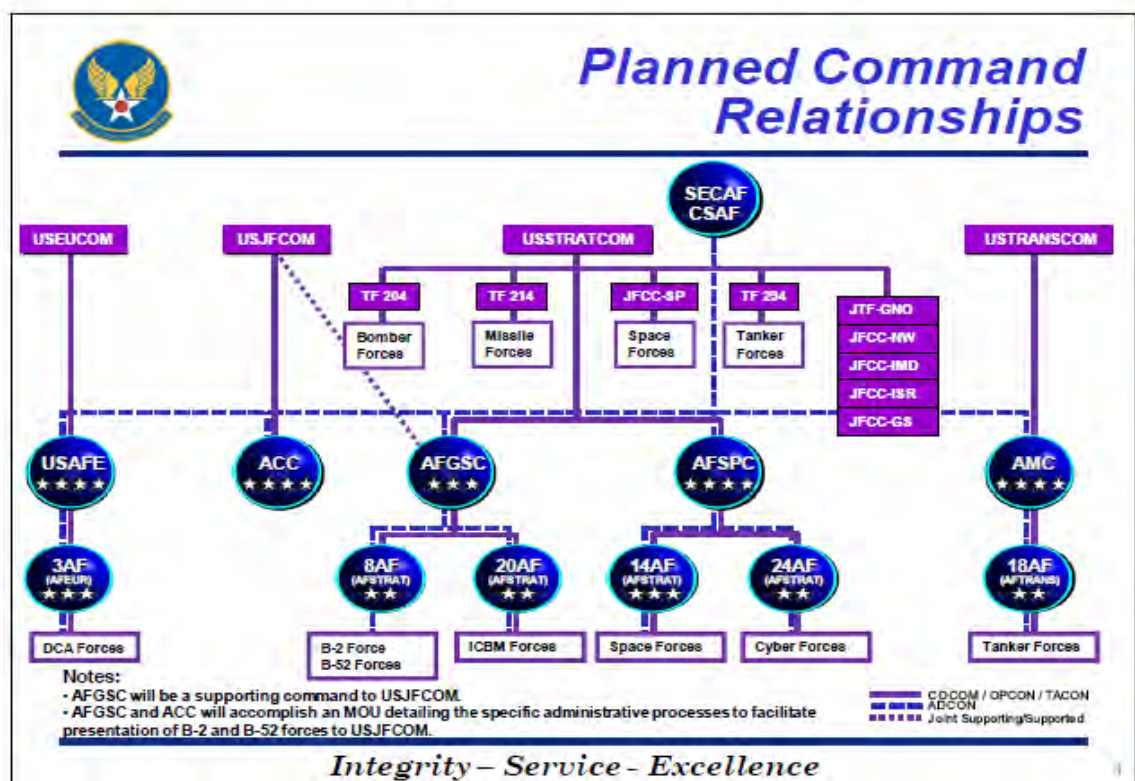


The Air Force disagreed with Recommendation No. 102, which recommended that the Secretary of the Air Force direct the consolidation of existing Air Force technical organizations into a single technical organization. Air Force personnel stated that implementing that recommendation was not practical because of the way the Air Force was organized. Recommendation No. 101 recommended that the Air Force dedicate a full rapid response commitment to the nuclear mission on a continuous basis by rotating the commitment among the B-52 squadrons. The Air Force established the Global Deterrence Force to provide forces to the nuclear mission, which includes nuclear bomb wings on a rotating basis. However, Air Force personnel stated that the U.S. Joint Forces Command had operational control of those forces.

Air Force Global Strike Command. The Air Force Global Strike Command is a single major command focused on and dedicated to the nuclear and conventional global strike mission, which is a key component of strategic deterrence. The Secretary of the

Air Force and the Chief of Staff the Air Force activated the Global Strike Command on August 7, 2009. The organizational construct will align Intercontinental Ballistic Missile and dual-mission capable bomber forces under a single command and demonstrate a visible commitment to the global strike mission while taking full advantage of the existing Air Force field organizational structure. Air Force Global Strike Command will be responsible for organizing, training, and equipping Intercontinental Ballistic Missiles forces, B-2 bomber forces, B-52 bomber forces, and other deterrence capabilities to conduct operations. The Air Force Strike Command will be commanded by a Lieutenant General (3 star). The Air Force Global Strike Command is responsible for the implementation of the Global Deterrence Force dedicated to supporting the U.S. Strategic Command mission. The following Table was provided by the Air Combat Command.

Figure 2: Command Relationships



Global Deterrence Force. Air Combat Command has implemented the Global Deterrence Force as a means of providing a training period of increased emphasis on nuclear operations for bomber units. The Global Deterrence Force will use a rotational approach² designed to create a balance between the strategic and nuclear deterrence mission and current conventional operational requirements. The "Reinvigorating the Air Force Nuclear Enterprise" stated that the Global Deterrence Force will allow continuous B-52 involvement (1 year cycles) and continuous B-2 presence. A fourth B-52 Squadron is expected to be established at the Minot Air Force Base in FY 2010 and will be

² One B-52 squadron will be assigned to the Global Deterrence Force for a one-year tour.

developed by moving B-52 aircraft from other squadrons. Activation of the fourth B-52 Squadron will be critical to the success of the Global Deterrence Force.

Resources. Seven recommendations, four reported open by the Air Force, addressed the deficiencies in resources. Although the Air Force states that Recommendation No. 28 is closed, it is dependent on the Global Deterrence Force being fully operational. The Air Force currently does not have an effective retention plan to build expertise in the Nuclear Program. The A10 Directorate and A1 Directorate, Deputy Chief of Staff, Manpower, Personnel & Services are working that issue. The most vulnerable positions for loss of expertise are:

- **Field and Company Grade Officers:** Field grade officers (Colonels, Lieutenant Colonels, and Majors) and Company grade officers (Captains and Lieutenants) are rotated out of the nuclear surety program after one assignment; therefore, they do not have an opportunity to continue their growth of expertise in the nuclear surety program.
- **Enlisted Personnel:** Additional requirements (inspections, safety, qualifications, and other requirements) involved with the nuclear surety program bring additional pressure not associated with other programs. Periodic tour rotations do not occur, which results in some enlisted personnel spending a majority of their tours in remote locations. As a result, enlisted personnel indicated that they would be more likely to leave the Air Force.

Management personnel with the security forces at Whiteman Air Force Base claimed that they are understaffed by 18 airmen. The understaffing has resulted in security forces personnel working excessively long days and weekends.

Administrative Personnel. Senior officials within the 8th Air Force stated that they did not have personnel to effectively perform administrative duties. Program Budget Decision 720, "Air Force Transformation Flight Plan," December 20, 2005, eliminated administrative personnel for the Air Force, including Barksdale, Minot, and Whiteman Air Force Bases. Senior officers stated that the elimination of administrative personnel pushed requirements on officers to perform administrative tasks, which prevented them from performing their managerial tasks in a timely manner. Officers must work long hours in order to complete their managerial and administrative tasks. Officers ability to coach, teach, and oversee their subordinates was greatly hampered, which will eventually impact the quality of work performed by personnel within the nuclear surety program.

Personnel Deployments. Officers at Minot and Whiteman Air Force Bases also stated that deployments offer excellent career incentives in terms of promotion potential and experience for those assigned. However, deployments put additional pressure on those not deployed because personnel that were not deployed had to perform the mission tasks without a full complement of personnel, even though manpower was already stressed. Those conditions may make it difficult for the Air Force to retain those personnel.

Leadership

Three recommendations, all opened, addressed leadership deficiencies. To complete those recommendations, the Air Force still needs to:

- establish a senior-mentor program focused on nuclear responsibilities;
- have all commanders complete certified nuclear weapons courses; and
- improve recruiting and retention in the nuclear specialties.

Those recommendations will help the Air Force to develop officers with the breadth of knowledge and experience needed to assume leadership in the nuclear enterprise and to efficiently reform the nuclear enterprise. Air Combat Command Instruction 36-211, “Air Combat Command Squadron Commander and Chief of Safety Hiring and Tenure Weapons Loading Procedures,” May 28, 2009, requires all new commanders with a nuclear-related mission to attend the “Air Force Nuclear Management Fundamentals Course.”

Mission Focus and Surety

Fifteen of the recommendations addressed mission focus and surety. The Air Force considered eight recommendations open and seven recommendations closed.

Mission Focus. Three recommendations, one reported open by the Air Force, are related to Mission Focus. The Air Force restructured the Headquarters, Air Force to form the A10 Directorate, whose singular focus is the nuclear enterprise. The Air Force is conducting risk assessments to determine the trade-off between conventional and nuclear taskings. The Air Force is still working on the review of Logistics Composite Model studies to determine the challenges in maintaining qualifications and certifications for Air Force units with dual missions (nuclear and conventional missions.) Dual mission and Primary Nuclear Airlift Force mission requirements are not specifically addressed in Logistics Composite Model studies. Review of the Combat Air Force maintenance manpower requirements, using the greater of peace or wartime requirements, indicated that excess capacity exists during peacetime. However, the review did not consider whether there was sufficient manpower during wartime. The Air Force was continuing to analyze that issue. The Air Force was revising the Air Force doctrine to include its new vision in strategic communications, which includes the nuclear enterprise.

Surety. Twelve recommendations, seven reported open by the Air Force, were related to Surety. The Bomb Wing Commanders at Barksdale and Minot Air Force Bases reviewed the actions of all personnel involved and/or responsible for the B-52 incident and completed the Personnel Reliability Program actions they deemed appropriate.

Air Force Instruction 90-201 “Inspector General Activities,” November 22, 2004, was revised to include no-notice inspection procedures and to standardize Nuclear Operational and Readiness Inspections, including grading criteria and reporting procedures. On February 23, 2009, the Air Force Inspector General became the Office of Primary Responsibility for operational readiness inspections while Air Force Materiel

Command will maintain a support role. The Air Force organizations are developing and expanding inspection checklists specific to Air Force guidance on nuclear related operations. The checklists will be analyzed by the Air Force Inspection Agency to refine and clarify tasks within the Nuclear Enterprise. The Air Force Inspection Agency will determine whether additional changes for inspections are needed after Air Force Global Strike Command changes are implemented through the Commands and they have an opportunity to evaluate effects of those changes.

The Air Force Inspection Agency created a centralized team of nuclear inspectors, known as the Air Force Nuclear Surety Inspection Core Team, to increase the standardization and consistency of Nuclear Surety Inspections across the Air Force. Initial operational capability occurred on July 30, 2009. The Air Force will assign subject matter experts from the field to develop the core team. The Air Force will train and certify members of the core team as nuclear inspectors, which will allow core team members to grow their experience across the Air Force nuclear enterprise. The purpose of the core team is to provide Major Command IG teams a tailored, dedicated group of highly skilled, very proficient nuclear inspectors whose primary mission is to augment 10 to 14 Nuclear Surety Inspections per year across all nuclear Major Commands. The desired effect is to help ensure exacting nuclear standards are applied consistently and effectively across the Air Force.

The Core Team merges with the Major Command IG team to form a single inspection unit under the direction of the Major Command IG team chief, while Air Force Inspection Agency provides the deputy team chief. The Major Command IG team chief retains the authority as the on-site director and is responsible for determining the inspection grade and completing the inspection report to the Major Command commander.

The Defense Threat Reduction Agency stated that they were working with the Air Force Inspector General on the inspection process. They also stated that they were in favor of separate Defense Threat Reduction Agency and Air Force inspections because the Defense Threat Reduction Agency covers different areas than the Air Force. The Air Force Inspector General sent a letter in November 2007 emphasizing the importance of the fourth criteria in determining Nuclear Surety Inspection Grades. The fourth criteria involves the overall competency of a unit-disregard of prescribed procedures; shortages of personnel, equipment, or parts; and failure to comply with applicable policies and procedures governing the Use, Control, and Command Disable System.

Recommendation No. 6 recommended that the nuclear handling procedures should be the same for training, testing, and actual operations. The Air Force did not agree with the recommendation because they already used the same nuclear handling procedures for training, testing, and actual operations.

Training and Force Development

Thirty-seven recommendations addressed deficiencies in training and force development. The Air Force considered 9 recommendations open and 28 recommendations closed.

Training. Twenty-five recommendations, three reported open by the Air Force, were related to training deficiencies. Training for the nuclear mission increased significantly since the Minot incident in 2008. The Air Force increased the emphasis on leadership, operational, maintenance, and security training for the nuclear mission. Although some of the recommendations were directed to one specific Air Force Base, the Air Force chose to extend the actions beneficial to other Air Force organizations.

The Air Force added nuclear ground training, weapons preflight, and simulator and flight training to the B-52 Formal Training Unit. The Air Force also added one nuclear sortie, one Nuclear Weapons Systems Trainer, four ground training courses, and a nuclear weapons preflight training course to the B-52 Weapons Instructor Course. The Air Force added the Defense Integration and Management of Nuclear Data Services system (a Defense Threat and Reduction Agency tracking system) to the Sheppard Air Force Base 363rd Training Squadron for training purposes.

The Air Force Nuclear Weapons Center worked with the major commands and the Air Force Nuclear General Officer Steering Group to catalog available Major Command, DoD, and Department of Energy nuclear-related courses and to identify redundancy with the planned Air Force Nuclear Management Fundamentals Course. The Air Force was also working to add detailed, hands-on scenarios to conduct accountable transactions to strengthen Munitions Accountable Systems Officers training.

Force Development. Twelve recommendations, six reported open by the Air Force, are related to deficiencies in Force Development; however, all recommendations will impact force development within the Air Force nuclear enterprise. The Air Force has taken steps to positively impact on force development, including submitting safety and security initiatives in the FY 2009 Unfunded Requirement List.

Air Force Instruction 21-204, "Nuclear Weapons Maintenance Procedures," January 17, 2008, mandated specific Munitions Control duties and responsibilities for planning and scheduling. Standard qualification tasks were added to the 2W2X1 Career Field Education and Training Plan, which will be used to qualify munitions controllers for their duties. The Air Force decertified handling personnel at the 5th Bomb Wing Munitions Squadron. Those personnel were either permanently decertified or requalified and recertified on duties related to weapons transport.

Air Force Manpower, Personnel, and Services Directorate (A1 Directorate) personnel stated that the Air Force does not have a dedicated officer career field for the nuclear mission; however, there are paths within each career field that lead to professional nuclear proficiency. The only dedicated enlisted career field is the 2W2 nuclear maintenance field. They also stated that the Air Force is devising a strategy to measure training, evaluations, and mission readiness trends.

The A1 directorate analyzed the viability and manning of the nuclear enterprise Air Force Specialty Codes. On September 1, 2008, personnel within the A1 Directorate completed

a list of 1,216 critical nuclear positions³ by creating 40 Special Experience Identifiers and reviewing every Air Force personnel folder to identify every Air Force person with experience in one or more of those Special Experience Identifiers.

The A1 Directorate identified five officers and eight enlisted Air Force Specialties to be within the nuclear enterprise⁴. A1 Directorate personnel stated that all Air Force Specialty Codes have authorization structures that are sustainable except for: space and missile, munitions and missile maintenance, and security force officers. All Air Force Specialties have acceptable permanent party manning levels except for bomber, and command post personnel. The Air Force will address the command post issues in FY 2010 by increased accessions and re-training. The bomber pilots and bomber navigators manning shortages are part of a larger rated force management issue. A1 Directorate personnel stated that they continue to support rated bonuses, rated recall⁵, and maximum pipeline production to improve the situation. Functional prioritization plans are vital for all Air Force Specialties. The Air Force will address further manning and sustainability issues via their normal force management processes.

The Air Force continues to develop:

- a list of nuclear-related billets due to the activation of A10 Directorate positions within the Air Combat Command and Major Commands, and
- a formal career development plan related to the nuclear enterprise, which is near completion.

The Air Force added all required billets to the 8th Air Force/Task Force 204 by moving 26 billets from the Air Combat Command Headquarters; however, all billets have not been filled. A10 Directorate personnel stated that the billets will be filled by the end of FY 2009.

Interviews with officers in charge of the Minot and Whiteman Air Force Bases' Medical Group stated that they were undermanned because the Air Force deployed medical personnel to meet Operation Iraqi Freedom and Operation Enduring Freedom requirements. They also stated that meeting medical requirements for the Personnel Reliability Program consumed most of their resources. As a result, medical requirements not associated with the Personnel Reliability Program were not fully met. With the large influx of personnel expected with the activation of a second bomb squadron at Minot Air Force Base, the medical personnel at Minot stated that the staff will have an increasingly

³ Any position so critical to the execution of the nuclear mission that, if the person filling the position lacks the requisite experience, it will present an unacceptable risk to nuclear surety or mission execution.

⁴ Bomber pilots (11B), bomber navigators (12B), space and missile (13S), munitions and missile maintenance (21M), and security force (31P) officers Air Force Specialties; and the command post (1C3), missile and space systems electronics maintenance (2M0X1), missile and space systems maintenance (2M0X2), missile and space facilities (M0X3), munitions systems (2W0X1), aircraft armament systems (2W1X1), nuclear weapons (2W2X1), and security forces (31P0X1) enlisted Air Force Specialties.

⁵ Pilots, navigators, and air battle managers who retired as a lieutenant colonel or below.

difficult time meeting its Personnel Reliability Program requirements. A10 Directorate personnel stated that they are reviewing that issue.

Transportation, Accountability, Tracking, and Scheduling

Thirty-nine recommendations addressed transportation, accountability, tracking, and scheduling deficiencies. The Air Force considered 8 recommendations open and 31 recommendations closed. Transportation, accountability, tracking, and scheduling have improved within the Air Force nuclear community.

Transportation. Four recommendations, three reported closed by the Air Force, addressed deficiencies in the transportation of nuclear weapons. Based on the recommendations, the Air Force changed Technical Order 1B-52H-30-4 “Aircrew Weapons Delivery Manual,” May 12, 2008; adding inspection requirements for tactical ferry and two weapons qualified persons for weapons acceptance. The changes to the Technical Order were related to preflight instructions and training. See Appendix C for the language change. The Air Force received funding for stockpile movement for FY 2008 and FY 2009. For Intercontinental Ballistics Missile, the Air Force completed the prototype for a new Payload Transporter and has included a funding request in its FY 2012 Program Objective Memorandum.

Mission Impact Statement of Nuclear-Related Movements. The Air Force 708th Nuclear Sustainment Squadron provided the following mission impact statement to the Air Force Material Command. “Nuclear weapons are considered national assets and require the highest safety and security due to the disastrous consequences of damages to, or loss of, a weapon or component. Nuclear weapons, components, trainers, and support equipment are only moved when absolutely necessary to support Department of Defense and Department of Energy surveillance programs, scheduled maintenance activities, emergency support activities, repair actions, and nationally directed drawdown policies. Nuclear-related movements are projected annually by the 708th Nuclear Sustainment Squadron. All air movements are supported by Air Mobility Command through Special Assignment Airlift Missions and the Department of Energy supports all surface movements. Both modes of transportation carry very high costs required to assure the highest level of security and safety as required by National Security.”

Nuclear Weapons Movement Priority. Air Force 708th Nuclear Sustainment Squadron personnel stated that transportation of nuclear weapons has a Joint Chief of Staff priority code of 1A3, programs approved by the President for top national priority, as directed by Chairman of the Joint Chiefs of Instruction Staff 4120.02A, “Assignment of Movement Priority, October 25, 2007.” They also stated that failure to fund nuclear weapon and nuclear-related movements will result in the U.S. Government's inability to:

- support the Presidentially-directed Nuclear Posture Review drawdown;
- support the Presidentially-directed Nuclear Surveillance Program
- Support deployment/redeployment to meet Combatant Commanders' requirements;

- support maintenance activities required to keep nuclear weapons safe and reliable; and
- support maintenance activities required to return unserviceable weapons in the field to the custody of the Department of Energy.

Air Force 708th Nuclear Sustainment Squadron personnel also stated that Second Destination Transportation funding for nuclear weapons movement requirements is not identified as "must pay." However, Second Destination Transportation funding now has top 5 priority versus the limited visibility and support that it had a few years ago

Accountability. Twelve recommendations, all but one was reported closed by the Air Force, addressed deficiencies in accountability of nuclear weapons. Recommendation No. 35 recommended that the Air Force require mandatory quality assurance evaluations of munitions controllers⁶. A draft revision to Air Force Instruction 21-200, "Munitions and Missile Maintenance Management," directs quarterly inspections of munitions control. The Air Force expects to have the final signed by September 30, 2009.

Air Force did not agree that Recommendation 26 and 27 are recommendations. Air Force personnel stated the Air Force addressed the custody transfer from the outgoing commander of a Wing/Squadron to the incoming commander. Air Force personnel at the 5th and 509th Bomb Wings stated that the custody process was included in Air Force Instruction 21-204 which requires the Munitions Accountable Systems Officer to retain custody of the nuclear weapons. The instructions also require the incoming and outgoing Munitions Accountable Systems Officers to conduct a joint 100 percent inventory as of the effective date of the transfer of accountability. Air Force personnel believed that since the Commander appoints the Munitions Accountable Systems Officers and the Munitions Accountable Systems Officers is authorized to accept custody of the nuclear weapons, this procedure meets the one-time custody acceptance requirement. In addition, Air Force Instruction 21-203 "Nuclear Accountability," now in draft, will require the Munitions Accountable Systems Officer to brief the wing commander and group commander, semi-annually, on the status of nuclear weapons accountability within five duty days of the Defense Threat Nuclear Agency reconciliation.

The Air Force increased emphasis on individual accountability for each person working the nuclear mission. The Wing Commander still must approve all nuclear weapons movement outside a restricted area. The Air Force revised Air Force Instruction 21-204, which added the following accountability requirements:

- Commanders' responsibility for:
 - appointing the MASO,
 - selecting inventory/audit officers,

⁶ The Munitions Controller is the focal point for planning, coordinating, directing, and controlling munitions and weapons activities. Additionally, the senior controller on duty will verify weapon, reentry systems, and/or launch gear and configuration status to ensure it matches mission requirements prior to any weapons movement.

- designating positions authorized to accept custody of nuclear weapons,
 - one time custody acceptance, and
 - authorizing movement of all nuclear weapons outside the restricted area;
- no comingling of nuclear and nonnuclear weapons in storage structures;
 - a scheduling modification record for any change to the approved weekly schedule affecting major maintenance action;
 - MASO qualifications to include 12 months nuclear weapons maintenance management experience and completion of the Nuclear Maintenance Officer's Course; and
 - specific Munitions Control duties and responsibilities for planning and scheduling.

Air Force Instruction 21-204 also requires that individuals accepting custody of nuclear weapons sign an "Air Force Information Management Tool 504, Weapons Custody Transfer Document" any time a warhead, weapon, or reentry system is removed from a structure or when custodial responsibility is transferred between individuals in separate organizations. When custody transfers, the gaining and losing custodians are required to conduct face-to-face physical serial number verification and ensure personnel receiving custody are allowed to accept custody prior to transfer.

In addition, the Air Force put into operations the Global Deterrence Force, which allows continuous B-52 involvement and continuous B-2 presence. They issued Technical Order 1B-52H-16 (change 1), "Weapons Loading Procedures⁷," April 17, 2009, with detailed requirements for performing missile safe status checks prior to commencing load; however, that instruction did not provide guidance on missile safe status checks after the weapons are loaded.

Tracking Nuclear Weapons. Four recommendations, two reported open by the Air Force, addressed deficiencies in tracking the physical location of nuclear weapons. Recommendation No. 3, closed, involved custody document and custody signature. Recommendations 2 and 34 recommended a real-time tracking system, which the Air Force is developing.

Personnel within the 5th and 509th Bomb Wings stated that the Air Force had put more emphasis on tracking nuclear weapons. Air Force A10 Directorate personnel stated that the Air Force has developed the SharePoint system to track pylons, launchers, and reentry systems at all locations. Full implementation is scheduled for August 28, 2009. Until SharePoint is implemented, the 8th Air Force is using the Minot Munitions Control program, emails, and telephone communications from Whiteman Air Force Base for real-time tracking of nuclear weapons movement. The Air Force is also developing a long-

⁷ Procedures for loading and unloading bombs (B61 and B83) and missiles (AGM-86B and AGM-129) carried by B-52 aircraft

term enterprise solution, the Expeditionary Combat Support System, for tracking nuclear weapons movement. Estimated completion date the Expeditionary Combat Support System is FY 2015.

Scheduling Maintenance and Movement of Nuclear Weapons. Fifteen recommendations addressed deficiencies in the scheduling procedures for maintenance and movement of nuclear weapons. The Air Force reported all of those recommendations closed except Recommendation 36, which recommended that the Air Force emphasize munitions scheduling process as focus item of Nuclear Surety Inspections. The Air Force Inspector General provided guidance on July 28, 2008, that directed focus on munitions controls, and plans and scheduling. That guidance also included an inspection checklist for Major Command IGs. Air Force Instruction 90-201, June 17, 2009, expanded the scope of the Nuclear Surety Inspection Management and Administration major grade area to include munitions control and plans and scheduling for the sustained inspection requirement.

The Air Force commanders have assigned maintenance schedulers dedicated to working in the nuclear program. Wing Commanders were required to approve the original schedule and any changes to the original schedule. In addition to the commander's approval, the scheduler at Minot Air Force Base must approve, in writing, all changes to the schedule before any unit can deviate from the original schedule. The original weekly and monthly schedules and approved schedule changes were electronically sent to each unit, such as maintenance, security, and transportation. All supervisors had current schedules at the scheduling meetings we attended. The superintendents used current schedules to track and control maintenance for nuclear weapons during our visits.

Security

Four recommendations, three reported open by the Air Force, addressed the deficiencies in security. The Air Force addressed the 3 open recommendations in the Roadmap and in the draft of the Air Force Nuclear Weapons Security Roadmap. Air Force personnel stated that the "Air Force Nuclear Weapons Security Roadmap" is part of an on-going process of analyzing nuclear security vulnerabilities (capability gaps and shortfalls) and the effect of various mitigation measures.

The Air Force stated that they continue to field the latest technologies to enhance nuclear security. Recently, sensor upgrades were completed at F. E. Warren AFB and Malmstrom AFB and construction has begun at Minot AFB. Funding for security enhancements was received for EUCOM Site 5 and the Air Force is waiting on approval of funding for Site 6. Air Force Space Command has completed installation of Remote Visual Assessment at all installations and it is undergoing testing. The Air Force developed a Program Objective Memorandum for portal monitoring devices to be installed at vehicle entry and exit points and convoy routes, which was accomplished by adding funding requirements to the Unfunded Priority List.

Also, the Air Force decided not to implement Recommendation 7, which recommended that the Air Force treat all storage shelters with the same nuclear surety, safety, and reliability procedures. Their position was that there should be a distinct procedural

difference in handling, transporting, storing, and securing nuclear assets versus non-nuclear assets. They stated that there are significantly more security requirements for opening and closing, responding, and securing shelters with nuclear assets. Security personnel at Minot Air Force Base and Whiteman Air Force Base stated that their security units did not have the manpower to support treating all shelters as if they contained nuclear weapons. They also stated that their security forces were taxed to the limit because many of their security personnel were deployed to support the war efforts in Iraq and Afghanistan.

Other Matters of Interest

Facilities and Equipment. Minot Officers stated that the hangar spaces (docks) used to maintain the B-52s were in poor condition and need repair or replacement. Whiteman Air Force Base personnel stated that they needed additional Rotary Launcher Assemblies to reduce the strain on personnel and to keep the 509th Bomb Wing full up mission ready. In addition, Minot Air Force Base and Whiteman Air Force Base personnel were using 1960's era test equipment to maintain nuclear bombs and missiles. Maintenance personnel had to repair the test equipment because the manufacturer no longer supported the outdated equipment. Some technical systems for the B-52H are over 50 years old, and the systems for the B-2 Stealth Bomber are beginning to show their age. Continuous replacement, rather than repair, is essential for some systems.

High Mobility Multi-Purpose Vehicles. Air Force security personnel at Minot Air Force Base and Whiteman Air Force Base expressed concern that a lack of armored vehicles increased personnel requirements. Security personnel were using the High Mobility Multi-Purpose Wheeled Vehicle in both a "standard" and an "up-armored" configuration. However, that Vehicle was designed for high speed troop and equipment transport in an open field environment, and not for force suppression in the confined spaces of a Weapons Storage Area. A more heavily armored vehicle is needed, on the lines of the Mine Resistant Armored Personnel Carrier, which would allow security personnel protecting nuclear weapons to engage hostile forces with superior firepower from an armored protective platform.

Firing Range. Security officials at Whiteman Air Force Base also stated that the Air Force needed a firing range for training and qualifying security personnel. They currently use the Army's firing range; however, that usually required extended days of training because they were bumped from the shooting range by Army personnel doing their training and qualification. Personnel at Air Combat Command stated that this was an Air Force issue, not just a Whiteman Air Force Base issue; however, finding suitable property is difficult.

Conclusion

The Air Force is making progress in re-invigorating its nuclear weapons enterprise. Two new command structures; the A10 Directorate (Strategic Deterrence and Nuclear Integration) and the Global Strike Command were established with General Officer resident leadership and are already promulgating policy decisions. Operational aviation units at the wing and squadron level have been designated with a primacy in strategic

nuclear operations. The procedures for the handling, movement, and maintenance of nuclear weapons from storage to actual vehicle attachment have been thoroughly reviewed and revised, and an increased emphasis on nuclear maintenance and management has been added to the junior enlisted, non-commissioned officer, company grade officer, field grade officer, and general officer leadership curriculums.

However, the momentum generated by the intense public scrutiny, DoD emphasis, and Congressional oversight will not be sustained unless key funding decisions are continued, and personnel and technical resources are allocated. Officer and enlisted personnel involved with the nuclear enterprise received occupational specialties, which improved personnel competence and safety. That progress can only continue if:

- officer and enlisted personnel are periodically rotated through nuclear assignments at intervals throughout their career, ensuring expertise in Company grade and Field Grade Officers; and Senior Non-commissioned and Non-commissioned Officers;
- recruiting and retention in the nuclear specialties are improved and
- necessary equipment upgrades for both technical and ancillary (security and supply) endeavors are undertaken.

Management Comments

The A10 Directorate, Global Strike Command, and the Air Combat Command provided unofficial comments to the reports, which generally agreed with the report. They provided updated information on the status of the recommendations, corrections, and minor edit changes. The Global Strike Command was concerned that the report implies that we looked at the entire Air Force nuclear enterprise when we only looked at the bomber portion of the nuclear enterprise.

Our Response

As a result of management comments, we updated the status of all recommendations in the draft report. We made all relevant and supportable changes to the report. We clarified that our review was on the bomber portion of the Air Force Nuclear Enterprise because the majority of recommendation in the Commander Directed Report of Investigation Concerning an Unauthorized Transfer of Nuclear Warheads between Minot AFB, North Dakota and Barksdale AFB, Louisiana (CDI), the Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures (BRR), and the Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons (DSB) were directed to the bomber activities.

Appendix A. Scope and Methodology

We designed our review to determine the status in implementing the recommendations in the report addressed to the Air Force. Those recommendations generally addressed issues within the bomber portion of Air Force Nuclear Enterprise. We did not visit the U.S. Air Force sites outside the continental U.S to determine the status of recommendations. We conducted this review from August 2008 to July 2009 in accordance with “Quality Standards for Federal Offices of Inspector General.”

We obtained copies of the Commander (Air Combat Command) Directed Investigation; the Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures, and the Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons. We gathered documentation to gain an understanding of the policy, processes, procedures, and training the Air Force implemented to correct identified deficiencies and the plans the Air Force developed to correct those deficiencies not completed. We developed a list of recommendations identified in those reports. We asked the Air Combat Command to provide the status (open or closed) and description of what was done to correct the deficiencies or a description of the plan that the Air Force would use to correct open recommendations. We verified the status of the majority of the recommendations. See Appendix B for the list of recommendations. We reviewed and verified all known policy changes. See Appendix C for a list of policy changes. We also observed maintenance scheduling, maintenance, training, and weapon storage areas operations procedures at Barksdale, Minot, and Whiteman Air Force Bases. We held discussions with officers and/or enlisted personnel with the Joint Chiefs of Staff, A10 Directorate, A1 Directorate, Air Combat Command, 8th Air Force Base, 5th Bomb Wing, 509 Bomb Wing; and the Defense Threat Reduction Agency. We believe that the evidence obtained provides a reasonable basis for our conclusions.

We conducted site visits at A10 Directorate: A1 Directorate, Air Combat Command, Barksdale Air Force Base, Minot Air Force Base; Whiteman Air Force Base, and the Defense Threat Assessment Agency. We reviewed the:

- Air Force Commander (Air Combat Command) Directed Investigation, August 30, 2007;
- Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures, February 8, 2008;
- Defense Science Board Report on the Unauthorized Movement of Nuclear Weapon, February 2008 (Revised April 2008) reports to identify recommendations;
- Air Force strategic plan;
- Air Force “Reinvigorating The Air Force Nuclear Enterprise,” October 24, 2008;
- Air Force Instruction 90-201, “Inspector General Activities,” November 29, 2008;
- Air Force Instruction 21-204, “Nuclear Weapons Maintenance Procedures,” January 17, 2008;
- Air Combat Command Instruction 21-165, CAF: “Aircraft Flying and Maintenance Scheduling Procedures,” April 22, 2008;

- Air Combat Command Instruction 36-211, “Air Combat Command Squadron Commander and Chief of Safety Hiring and Tenure Weapons Loading Procedures,” May 28, 2009;
- Air Combat Command Instruction 36-2201 (v3), “Air Force Training Program on the Job Training Administration,” December 20, 2006;
- Technical Order 1B-52H-16, “Weapons Loading Procedures,” April 17, 2009; and
- Technical Order 1B-52H-16CL, “Weapons Loading Procedures,” April 17, 2009.

Use of Computer-Processed Data

We did not use computer-processed data to perform this audit.

Prior Coverage

During the last 5 years, the Department of Defense Inspector General (DoDIG) has issued five reports concerning nuclear surety.

DoD IG

09-INTEL-02 “Oversight of the Nuclear Surety Inspections Conducted in the Aftermath of the B-52 Incident,” December 04, 2008

08-INTEL-03 “Review of Threat Assessment Guidance Regarding Nuclear Weapons Located Outside the Continental United States,” March 20, 2008

08-INTEL-11 “Audit of Proposed Revisions to the Term "Access" to Nuclear Weapons,” September 12, 2008

06-INTEL-07 “Nuclear/National Command & Control Support to the President,” July 20, 2006

05-INTEL-19 “Identification of Critical Nuclear Command and Control Facilities and Equipment,” June 30, 2005

Appendix B. Schedule of Recommendations

This appendix shows the recommendations in the Commander Directed Report of Investigation Concerning an Unauthorized Transfer of Nuclear Warheads between Minot AFB, North Dakota and Barksdale AFB, Louisiana (CDI), the Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures (BRR), and the Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons (DSB) reports. Acronyms used in this table are at the end of the table.

Table 2. Implementation Status of Recommendations

	Status	Report	Recommendation	Implementation Status
1	Closed	CDI (09.26-2 CDI 40) ⁸	Change Air Force Instructions (AFI) 21-204 and 91-111 regarding placarding.	AFI 21-204, January 17, 2008, mandates that units will not co-mingle nuclear and non-nuclear munitions (i.e., trainers, test assemblies, tactical ferry payloads, etc.) in the same storage structure. Only as a last resort and with Major Command (MAJCOM)/Munitions and Weapons Division (A4W) explicit approval may assets be co-mingled. All non-nuclear munitions items will be identified using stanchions/cones, ropes, and placards to ensure there is a clear distinction between nuclear and non-nuclear munitions. Air Force (AF) Safety Center recommends no changes to AF 91-Series instructions. Does not apply to Barksdale at this time.
2	Open	CDI (09.04 CDI 13)	Develop a process for continuous real-time tracking of any nuclear munitions.	In Work: 8 AF currently tied into Minot Munitions Squadron Command program and using emails/phone calls from Whiteman for "real time" tracking of movements. SharePoint system currently being beta tested at Minot. Subject Matter Experts involved in long term solution to use Expeditionary Combat Support System blueprinting efforts to identify requirements and develop longer term, enterprise solution. Assessments Estimated Completion Date: September 2009
3	Closed	CDI (09.25-03 and 04 CDI 42)	Establish common custodial document to accompany bill of lading.	AFI 21-204, as published January 17, 2008, requires a custody transfer anytime a warhead/weapon/reentry system is removed from a structure (i.e., igloo, Protective Aircraft Shelter, maintenance facility, launch facility, etc.) or when custodial responsibility is transferred between individuals assigned to separate organizations. Individuals conduct

⁸ The number below the report identifies the recommendation reference number in the Air Force Nuclear Enterprise Management Tool.

	Status	Report	Recommendation	Implementation Status
				face-to-face physical serial number verifications and ensure personnel receiving custody are an authorized recipient prior to custody transfer. Individuals accepting custody of nuclear weapons sign an AF Information Management Tool (IMT) 504, Weapons Custody Transfer Document
4	Closed	CDI (R01-05)	Establish BRR.	BRR report delivered February 2008.
5	Closed	CDI	Aircrews generally do not have a firm grasp of their nuclear weapons as equally as they do their conventional weapons. The U.S. AF Weapons School curriculum appears not to emphasize nuclear weapons. Beyond a curriculum review, the panel should take a very hard look at the training approach starting at the centers of excellence and proceed through our formal training units.	Weapons Instructor Course has added 1 nuclear sortie, 1 nuclear Weapons System Trainer, 4 ground training courses, and a nuclear weapon preflight.
6	Open	CDI	Regardless, from "boom" to ballast payloads, the nuclear handling procedures should be the same for training, testing, and actual operations.	Air Force is not tracking this CDI recommendation.
7	Closed	CDI (09.26-3 CDI 62)	Treat all shelters with the same nuclear surety, safety, and reliability procedures.	Rejected. Justification: There should be a distinct procedural difference in handling, transporting, storing, and securing a PL-1 asset vice a non-nuclear munitions item. Non-nuclear munitions items (i.e., load/shape trainer, RV/RS load shape trainer, etc) are stored in WSA, load barns, protective aircraft shelters, payload transporters, or training launch facilities. No-nuclear munitions items do not present the same risk and thus do not require the same nuclear surety, safety, and reliability procedures as PL-1 assets. Units have flexibility to move non-nuclear munitions items to, from, and within storage locations without using PL-1 procedures (i.e., convoys, route sweeps, limited areas, Wing Commander permission, etc). Units are not manned (maintenance or security) to support this requirement. Additionally, physical and electronic security systems which would be required are not resourced. Use of force rules are not applied to shelters with non-nuclear munitions items, causing confusion for

	Status	Report	Recommendation	Implementation Status
				patrolling and responding forces and could risk an issue of excessive use of force.
8	Open	CDI (R03-01.1)	Review scope, scale, and durations of Nuclear Surety Inspections and Nuclear Operations Readiness Inspections.	<p>NOTE: R03-01.1 and R03-01.2 are sub-sets of Roadmap Action Plan 3, improving inspection standardization.</p> <p>Nuclear Surety Inspections:</p> <ul style="list-style-type: none"> - Inspection teams have increased depth and rigor of Nuclear Surety Inspections - Instituted no-notice and minimal-notice inspections (to included Limited Nuclear Surety Inspections) - Standardization elements laid (oversight, training, checklists) - Feedback mechanism for handling Joint Staff changes (Nuclear Surety Inspections Process Review Group) <p>Recommend CLOSE (R03-01.1)</p> <p>Nuclear Operation and Readiness Inspections:</p> <p>Phase 1: SAF/IG has added complete chapter in AFI 90-201 to standardize Nuclear Operation and Readiness Inspections. Includes grading criteria, major graded and sub-areas and reporting procedures.</p> <p>[Phase 2: SAF/IGI sponsor NORI conference; bringing together MAJCOM and Combatant Commands' Subject Matter Experts to further refine scope, scale, and duration of Nuclear Operation and Readiness Inspections (August 25-27, 2009)</p> <p>At this time, SAF/IG feels the Nuclear Operation and Readiness Inspections are adequate. Sweeping changes to Nuclear Operation and Readiness Inspections might be premature until AF Global Strike Command changes ripple through the Commands.</p>
9	Closed	CDI (R02.5-01)	Consider re-implementing no-notice Nuclear Surety Inspections (NSIs).	<p>AFI 90-201, Inspector General Activities, paragraph 3.3.1.1.2 currently provides option for MAJCOMs to conduct minimum-notice inspections.</p> <p>Addendum L to 90-201 describes no-notice procedures for ACC nuclear units, Tiers etc. Signed May 2008. ACC closed with execution of 3 tier inspection process under COMACC direction. October 2008.</p> <p>The IG issued Guidance Memorandum on July 28, 2008, directing no-notice and minimal-notice Nuclear Surety Inspections and Limited Notice Surety Inspections; also recommends applying to Operational Readiness Inspections and Unit Compliance Inspections – The IG issued Guidance Memorandum, 31 Dec 08, further defining</p>

	Status	Report	Recommendation	Implementation Status
				no-notice as 72 hours or less and minimal-notice as less than 45 calendar days; sets requirement for one out of every three full-scale Nuclear Surety Inspections should be no-notice or minimal-notice. Concerns: Refining policy requirements for ARC/ANG and USAFE implementation with the North Atlantic Treaty Organization and Host Nations - Revised AFI 90-201, Inspector General Activities, projected to be published April 2009 (to codify policy).
10	Closed	CDI (09.24-04 CDI 33)	Specify control procedures for nuclear munitions scheduling in AFI 21-204.	AFI 21-204, as published January 17, 2008, includes detailed procedures for rigid unit scheduling processes. Plans and Scheduling is the single POC for developing, coordinating, publishing, and distributing maintenance schedules. Plans and Scheduling tracks work order completion, manages delayed discrepancy list, awaiting maintenance, awaiting parts, and Time Compliance Technical Order programs and in the event of scheduling conflicts assign priorities. New procedures require quarterly forecasts, monthly plans, and weekly schedules. MAJCOMs define which sections will attend scheduling meetings to validate job requirements.
11	Closed	CDI (09.24-04 CDI 35)	Specify rigid process for schedule changes. Make it like the flying schedule process. Require Group/ Squadron CCs to approve changes.	AFI 21-204, as published January 17, 2008, requires any change to the approved weekly schedule affecting major maintenance actions, Protection Level One (PL-1) asset maintenance, or affecting another organization will require a scheduling modification record (i.e., AF IMT 2407). The agency requesting the change will initiate the modification record and coordinate it through affected agencies. At a minimum, the Maintenance Superintendent approves the change to the schedule by signing the record. MAJCOMs develop specific procedures to record and coordinate changes to the weekly schedule.
12	Closed	CDI (09.24-07 CDI 36)	Use one document to create and manage maintenance schedule.	AFI 21-204, as published January 17, 2008, includes detailed procedures for rigid unit scheduling processes. Plans and Scheduling is the single POC for developing, coordinating, publishing, and distributing maintenance schedules, which tracks work order completion, manages delayed discrepancy list, awaiting maintenance, awaiting parts, and Time Compliance Technical Order programs. In the event of scheduling conflicts, it assigns priorities. New procedures require quarterly forecasts,

	Status	Report	Recommendation	Implementation Status
				monthly plans, and weekly schedules. MAJCOMs define which sections will attend scheduling meetings to validate job requirements.
13	Closed	CDI (09.14-08 CDI 37)	Establish controls to limit those who can manipulate the schedule with analysis section as focal point within special weapons maintenance flight.	AFI 21-204, as published January 17, 2008, requires any change to the approved weekly schedule affecting major maintenance actions, Protection Level One (PL-1) asset maintenance, or affecting another organization will require a scheduling modification record (i.e., AF IMT 2407). The agency requesting the change will initiate the modification record and coordinate it through affected agencies. At a minimum, the Maintenance Superintendent approves the change to the schedule by signing the record. MAJCOMs develop specific procedures to record and coordinate changes to the weekly schedule.
14	Closed	CDI (09.24-12 CDI 47)	Require nuclear maintenance schedule be part of wing maintenance and ops plan to be briefed to Wing Commander in same detail as flying schedule.	AFI 21-204, as published January 17, 2008, includes detailed procedures for rigid unit scheduling process. Procedures require MAJCOMs to develop specific procedures to record and coordinate changes to the weekly schedule. ACCI 21-165 updated to reflect requirement. In Work: Office of Primary Responsibility will assess feasibility of standardizing the procedures established in MAJCOM supplements. A standard procedure will be incorporated in Change 1 to AFI 21-204.
15	Closed	CDI (R20-02)	Track munitions schedule deviations and brief them to Group/ Squadron CCs weekly.	AFI 21-204, as published January 17, 2008, includes detailed procedures for rigid unit scheduling process. Procedures require MAJCOMs to develop specific procedures to record and coordinate changes to the weekly schedule.
16	Closed	CDI (09.24-09 CDI 38)	Specify the minimum requirements for daily munitions production meetings, showing work scheduled, complete and any production delays. Develop minimum requirements for daily updates and detail minimum items that must be reviewed daily by Squadron leadership.	AFI 21-204, as published January 17, 2008, mandates section and element supervisors to conduct production meetings to discuss current and upcoming workload with section personnel. These items must be covered during production meetings: Trained, qualified, certified personnel availability; support equipment, vehicle, test and handling equipment availability and serviceability; supply and spares availability; and status of previous day's maintenance activities that may impact upcoming activities.
17	Open	CDI (09.22-1 CDI 11)	Require radiation detection checks on any missile transported out of Weapons Storage Area.	In Work: Developed ROM for portal monitoring devices to be installed at vehicle entry/exit points and primary/alternate convoy routes at CONUS Weapons Storage Area. Requires \$5.8 million for 12 sensors

	Status	Report	Recommendation	Implementation Status
				plus \$1 million per year in sustainment. Added to Unfunded Priority List.
18	Open	CDI (R42-01)	Commanders at all levels in direct chain of command of nuclear weapons attend a joint-oriented, nuclear certified course; regardless of direct or indirect responsibility of operational nuclear stockpile.	Air Force Nuclear Weapons Center (AFNWC) developed "AF Nuclear Fundamentals Course." They have completed 4 classes to date. Processing review feedback for course update. New ACCI 36-211 published May 28, 2009, directs all new commanders with a nuclear-related mission to attend the course prior to assumption of command-Para 5.4
19	Open	CDI (R80-01)	Establish senior-mentor program focused on nuclear responsibilities. "Grey-Beards" should be part of joint nuclear training course. Use existing AF Senior Mentors.	Senior mentor hired and is involved in working nuclear issues and training curriculums. Further use of "Greybeards" will be evaluated with the assistance of Air Education and Training Command/A10 Directorate who is being designated the single "gatekeeper" for nuclear training programs. In addition we are pursuing options/funding for Grey Beards to periodically assist the A10 Directorate.
20	Closed	CDI (CDI 40)	AF develop short poignant course at Maxwell AFB/ Air University for commanders that addresses doctrinal, procedural and operational arts of all things nuclear. Include a block of instruction on accountability and custody Defense Integration and Management of Nuclear Data Services (DIAMONDS).	Air Education and Training Command pointed out in emails that the definition of a 'short course' is the addition of a training block to the current Group and Wing commander course. Not a whole new course. Need AF/A10 Directorate approval that this course addition meets the intent of the task. Eaker College has incorporated a 1-hr lesson on Nuclear Issues in both the Wing and Group Commander courses.
21	Open	CDI (R80-01)	Use existing AF Senior Mentors to teach our nuclear-certified leaders.	UNABLE TO CLOSE ON TIME. Senior mentor hired (Maj Gen (Ret) McMahon), who is involved in working nuclear issues and training curriculums. Further use of "Greybeards" will be evaluated with the assistance of the Air Education and Training Command and the A10 Directorate, which is being designated the single "gatekeeper" for nuclear training programs. In addition, the AF was pursuing options and funding for Grey Beards to periodically assist A10.
22	Closed	CDI (R42-02)	Senior leadership ownership of nuclear weapons is not inherent. Make ownership a part of command for Munitions CCs and Wing Commanders.	AFI 21-204, as published January 17, 2008, places renewed emphasis on commander's accountability. Appointment authority for MASO elevated to Wing Commander. Selection of inventory/audit officer elevated to Wing Commander. Wing Commander designates positions authorized to accept custody of nuclear weapons. Wing

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				Commander authorizes all nuclear weapon movements outside the restricted area. Spirit and Intent: have commanders take ownership of weapons (not perform MASO accounting functions-inventory). One time custody acceptance.
23	Closed	CDI	Give the Munitions Squadron Commander and the Wing Commander ownership of the unit's nuclear stockpile.	AFI 21-204, as published January 17, 2008, places renewed emphasis on commander's accountability. Appointment authority for MASO elevated to Wing Commander. Selection of inventory/audit officer elevated to Wing Commander. Wing Commander designates positions authorized to accept custody of nuclear weapons. Wing Commander authorizes all nuclear weapon movements outside the restricted area. Spirit and Intent: have commanders take ownership of weapons (not perform MASO accounting functions and inventory). One time custody acceptance
24	Closed	CDI	The Munitions Squadron CC and Wing CC should receive some training on how to accept custody of the nuclear munitions.	The Air Force did not consider this an actionable recommendation because AFI-204 contains all training requirements.
25	Closed	CDI	The nuclear course for commanders should include a block of instruction on nuclear weapons accountability and custody.	The Nuclear Accountability block of instruction in the nuclear course for commanders includes those training blocks.
26	Closed	CDI	Chain of command should have a formal nuclear weapons munitions and mission handover prior to taking the flag of command responsibility.	AF closed this recommendation because the Air Force did not consider this a recommendation. However, the AF took the following actions. The revised AFI 21-204, places renewed emphasis on commander's accountability. Appointment authority for MASO elevated to Wing Commander. Selection of inventory/audit officer was elevated to Wing Commander. Wing Commander designates positions authorized to accept custody of nuclear weapons. Wing Commander authorizes all nuclear weapon movements outside the restricted area
27	Closed	CDI	Formally document and dissolve the outgoing commander's custody and inaugurate the new commander's custody. The MASO should be held accountable to both commanders for all changes to their aligned contract. This will force	AF closed this recommendation because the Air Force did not consider this a recommendation. However, the AF took the following actions. The revised AFI 21-204, places renewed emphasis on commander's accountability. Appointment authority for MASO elevated to Wing Commander. Selection of inventory/audit officer was elevated to Wing Commander. Wing Commander designates positions authorized

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			inherent ownership and custody of the nuclear stockpile at all echelons of command.	to accept custody of nuclear weapons. Wing Commander authorizes all nuclear weapon movements outside the restricted area
28	Closed	CDI (R24-01)	Assign nuclear units to Air Expeditionary Forces duty. Forces CCs to prepare for nuclear mission.	<p>Discussion held at the February 2008 Strategic Nuclear Action Group Conference; 8th AF held initial coordination session regarding potential short term B-2/ B-52 nuclear focused Air Expeditionary Forces - this duty is called the Global Deterrence Force (GDF). Air Staff Operations- Strategic Operations Division – (A3S) led two AO level meetings on developing longer term Course of Actions for B-52 nuclear focused GDF that will:</p> <ul style="list-style-type: none"> - require additional force structure and development of force presentation Course of Actions; - allow continuous B-52 involvement (1 year cycles) and continuous B-2 presence. - 4th B-52 squadron expected to stand up at Minot AFB in FY10. <p>GDF allows commanders to prepare and focus on nuclear mission with no-notice LNSIs to evaluate readiness. 8th AF/CC received ACC approval of Global Deterrence Force and a fourth B-52 Squadron to aid in alignment. Global Deterrence Force construct implemented October 1, 2008.</p>
29 -	Closed	CDI (13.15.04)	Requisition Defense Integration and Management of Nuclear Data Services terminal for Nuclear Maintenance Officer Course at Sheppard AFB.	Requirements evaluated and 14 terminals installed.
30	Open	CDI (13.04 Solution)	Expand MASO training.	<p>In Work: Nuclear Munitions Officer Course administrators have submitted recommendations to the Munitions & Missile Maintenance Officer AF Specialty Code 21M CFM to strengthen MASO training. These changes involve detailed, hands on scenarios to conduct accountable transactions using the DIAMONDS system. AFNWC performed a site survey March 2008 to assess DIAMONDS installation at Sheppard AFB. As soon as DIAMONDS is installed, current course waivers (for lack of DIAMONDS) will no longer be required. Additionally, course changes are currently in-work to incorporate new AFI 21-204 custody requirements and recent technical order changes. Nuclear Munitions Officer Course syllabus changes finalized at the August 8,</p>

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				2008, 21M Utilization and Training Workshop; event held to review training requirements for U.S. AF specialties. Course in work at Air Education Training Center. Curriculum on schedule for completion in August 2009. First class to take place in October 2009.
31	Closed	CDI (13.03.01-1 CDI 29)	Change the appointing official for the Munitions Accountable Systems Officers to the installation Commander. Require the MASO to certify to Wing Commander prior to assuming duties.	AFI 21-204, as published January 17, 2008, places renewed emphasis on commander's accountability. Appointment authority for MASO elevated to Wing Commander. Selection of inventory/audit officer was elevated to Wing Commander. Wing Commander designates positions authorized to accept custody of nuclear weapons. Wing Commander authorizes all nuclear weapon movements outside the restricted area
32	Closed	CDI (09.25-06 CDI 64)	Change procedures/checklists to require load crews to perform Missile Safe Status Checks prior to commencing load and after completing missile system checkout.	Training Order 1B-52H-16 and Training Order 1B-52H-16CL-1 have Interim Operational Supplements issued with detailed requirements for performing missile safe status checks.
33	Closed	CDI (R20-05)	Reassign the maintenance scheduler back into the nuclear munitions squadron.	Maintenance schedulers assigned into the nuclear munitions squadron.
34	Open	CDI	Establish one software system for munitions control and standardize it across the AF.	In Work: Intercontinental Ballistic Missile and Bomber units are fully compliant. SharePoint Munitions Command and Control currently in deployment in Europe. ECD: August 28, 2009 Long term solution remains with the Expeditionary Combat Support System. Subject Matter Experts involved in the Expeditionary Combat Support System blueprinting efforts to identify requirements and develop longer term, enterprise solution. Assessments. ECD: FY 2012
35	Open	CDI (03.09-1 CDI 32)	Require mandatory Quality Assurance evaluations of munitions controllers.	In Work. Table 8.1 of the draft revision to AFI 21-200 "Munitions and Missile Maintenance Management," currently out for MAJCOM coordination, directs quarterly inspections of munitions control. ECD: September 30, 2009.
36	Open	CDI (R03-02)	Emphasize munitions scheduling process as focus item of NSIs.	OPEN. R03-02 is a sub-set of Roadmap Action Plan 3, improving inspection standardization] Multi-phased approach. 1) SAF/IG Guidance Memorandum, July 28, 2008, directed focus on Munitions Control and Plans & Scheduling along with, AF/A4L

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				<p>provided, inspection checklist for MAJCOM IGs to use.</p> <p>2) SAF/IG expanded scope of Nuclear Surety Inspections Management and Administration major graded area in AFI 90-201 June 17, 2009) to include Munitions Control and Plans & Scheduling for the sustained inspection requirement</p> <p>3) AF/A4L policy updates have highlighted this area also.</p> <p>AF recommends closing.</p>
37	Closed	CDI (09.25-05 CDI 50)	Standardize duties of munitions controllers. Develop MAJCOM standard training and certification plan for Munitions Control Center controllers. Accomplish all normal procedures from Before Exterior Inspection through step 1b of After Engine Start and all Pre-landing Procedures and After Landing Procedures.”	AFI 21-204, published January 17, 2008, mandates specific Munitions Control and Plans and Schedules duties and responsibilities. Standardized qualification tasks have been added to the Nuclear Weapons Enlisted Technician AF Specialty Code (2W2X1) Career Field Education and Training Plan, which will be used to formally qualify Munitions Controllers for their duties. Recommend changing “certify” to “qualify.” A munitions controller performs administrative functions and should therefore be qualified rather than certified. AFI 36-2201 V3 states qualification training is hands-on performance training designed to qualify personnel in a specific position. Certification pertains to performing actual weapons maintenance and handling tasks and actions.
38	Closed	CDI (R11-01)	Submit AF Form 847 to change Technical Order 1B-52H-30-4, Aircrew Weapon Delivery Manual, pg 2-4, 2nd paragraph under TACTICAL FERRY to read: “...accomplish all normal procedures from Before Exterior Inspection through step 1b of After Engine Start and all Pre-landing Procedures and After Landing Procedures.”	Technical Order 1B-52H-30-4 wording changed as recommended.
39	Closed	CDI (R11-02)	Submit AF Form 847 to ACCI 10-450V2, paragraph 3.5.3., modifying 2nd to last sentence to read: “Requirements include...command and control procedures, Electronic Warfare Officer communications training,	ACCI 10-450V2, paragraph 3.5.3 wording changed as recommended.

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			and actual weapons preflight tactics.”	
40	Closed	CDI (R11-03)	Submit AF Form 847 to add to AFI 11-2B-52V1, Ready Aircrew Program tasking message, pg 10 paragraph 5g “Nuclear Functional Training.”	AFI 11-2B-52V1, Ready Aircrew Program tasking message wording added as recommended.
41	Closed	CDI (R11-04)	Submit AF Form 847 adding the following NOTE after existing NOTE on pg 2-8 to Technical Order 1B-52H-30-1 reading: “Regardless of missile payload, two weapons qualified personnel must preflight all missiles prior to aircraft acceptance and annotate completion of missile preflight to include payload type verification and status in AFTO 781.”	Note added to Technical Order 1B-52H-30-1 as recommended. Per ACC, the weapon described in this Technical Order is no longer in the active AF inventory. Technical Order 1B-52H-30-1 not being changed, due to this condition. B52-30-1IOS-4, an Interim Operational Supplement, was issued May 13, 2009, directing this change to Page 2-8.
42	Closed	CDI (R43-01)	Task ACC to re-evaluate B-52 nuclear training requirements and currencies. Delineate which organization is responsible for nuclear training requirements (Formal Training Unit versus gaining unit).	Formal Training Unit nuclear training increased—added nuclear ground training, weapons pre-flight, simulator, and flight. Gaining unit still required to allocate time for 2-weeks of Electronic Warfare Officer training (Operational Safety Suitability led) and an added nuclear sortie before individual can be Electronic Warfare Officer certified.
43	Closed	CDI (09.24-05 CDO 34)	Incorporate the Special Weapons Handling Section’s schedule into the Special Weapons maintenance Flight overall scheduling process.	AFI 21-204, as published January 17, 2008, includes detailed procedures for rigid unit scheduling processes. Plans and Scheduling is the single POC for developing, coordinating, publishing, and distributing maintenance schedules. Plans and Scheduling tracks work order completion, manages delayed discrepancy list, awaiting maintenance, awaiting parts, and Time Compliance Technical Order programs and in the event of scheduling conflicts assign priorities. New procedures require quarterly forecasts, monthly plans, and weekly schedules. MAJCOMs define which sections will attend scheduling meetings to validate job requirements. ACC: Newly developed 5 Munitions Operating Instruction 21-1650 and 5 Munitions Wings Operating Instruction 21-265 supplement guidance contained in Minot AF Base Operating Instruction 21-165, AFI 21-101, 21-201, 21-165, and 21-204. Scheduling process validated via Special

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				Inspection Item during December 2007. Para 1.2.1 requires Maintenance Wing review of daily progress of all scheduled jobs, including individual work orders
44	Closed	CDI (13.02-1 CDI 19)	Develop minimum training for munitions controllers and specify their duties in detail. Formally certify munitions controllers for their duties.	AFI 21-204, as published January 17, 2008, mandates specific Munitions Control and Plans/Scheduling duties and responsibilities. Standardized Munitions Control and Plans and Scheduling qualification tasks have been added to the 2W2X1 Career Field and Education and Training Plan which will be used to formally qualify Munitions Controllers for their duties. Future 2W2 certifications will be limited to weapons maintenance, mate/demate, handling, and final assembly checkout tasks. Munitions Control and Plans and Scheduling tasks have been updated in AFI 21-204 and applicable Job Qualification Standard related tasks have been added to the 2W2X1 Career Field and Education and Training Plan. Additionally, the Munitions Command and Control SharePoint environment, upon implementation, will standardize visual aid tracking AF-wide. Recommend that AF does not pursue a certification program for munitions controllers, Nuclear Ordnance Commodity Management technicians, or any other person performing an administrative type task.
45	Closed	CDI (R43-07)	Re-train all munitions control personnel on responsibilities to track, control, identify, and verify the status of nuclear and nuclear-inert assets.	All 5 munitions controllers were re-qualified on tracking, controlling, identifying, and verifying nuclear and nuclear-inert assets. Training included firefighting line number changes following asset movements and change of operational status. Sufficiency of re-training validated via Special Inspection Item during the December 2007 Initial Nuclear Surety Inspection.
46	Closed	CDI (R20-01)	Revise MUNS morning munitions briefing. Briefing must show work scheduled, work completed, and any production delays. Ensure squadron leadership reviews all items daily.	Rewrite of AFI 21-204 includes recommendation. Para 1.4.14.6.6 details minimum items addressed during morning meetings. Para 1.4.14.6.5.1 details procedures to follow to change schedule (AF IMT 2407). Squadron MX/ Superintendent is required to approve any changes to the schedule. Newly developed 5 Munitions Operating Instruction 21-1650, Para 1.2.1 requires Maintenance Wing review of daily progress of all scheduled jobs, including individual work orders.

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47	Closed	CDI (R43-08)	Decertify and train Special Weapons Handling personnel on all their duties relative to weapons transport. Retrain, qualify, and certify each individual.	All 5th Bomb Wing Munitions handling personnel were de-certified, re-qualified, and re-certified on duties related to weapons transport per ACC/A4 Memo dated October 26, 2007. Sufficiency of retraining validated during December 2007 Initial Nuclear Surety.
48	Closed	CDI (R43-09)	Retrain all Munitions Control Center personnel to promptly update and document firefighting line numbers following any change in status or location of nuclear munitions.	All 5th Bomb Wing Munitions Controllers were re-qualified on tracking, controlling, identifying, and verifying nuclear and nuclear-inert assets. Training included firefighting line number changes following asset movements and change of operational status. Sufficiency of re-training validated via Special Inspection Item during the December 2007 Initial Nuclear Surety Inspection.
49	Closed	CDI (09.24-02 CDI 44)	Immediately develop a process to coordinate schedule changes through all sections in the Munitions Squadron.	Para 1.4.14.6.5.1 details procedures to follow to change schedule (AF IMT 2407). Squadron Maintenance/ Superintendent are required to approve any changes to the schedule.
50	Closed	CDI (09.24-02 CDI 30)	Immediately ensure section supervisors bring schedules to the section production meetings and eliminate the use of note books as the vehicle for controlling work.	AFI 21-204 mandates section and element supervisors to conduct production meetings to discuss current and upcoming workload with section personnel. These items must be covered during production meetings: trained, qualified, and certified personnel availability; support equipment; vehicle, test, and handling equipment availability and serviceability; supply and spares availability; and status of prior maintenance activities that may impact upcoming activities.
51	Closed	CDI (09.24-03 CDI 31)	Ensure the production superintendent uses the schedule as his basis for tracking and controlling maintenance.	AFI 21-204, as published January 17, 2008, mandates section/element supervisors to conduct production meetings to discuss current and upcoming workload with section personnel. The following items must be covered during production meetings: Trained qualified, certified personnel availability; support equipment, vehicle, test, and handling equipment availability and serviceability; supply and spares availability, and status of previous day's maintenance activities that may impact upcoming activities.
52	Closed	CDI (09.24-11 CDI 45)	Limit those with authority to make changes to any munitions, maintenance or flight schedule. The wing should adhere to AF procedures for schedule changes.	AFI 21-204, as published January 17, 2008, requires any change to the approved weekly schedule affecting major maintenance actions, Protection Level One asset maintenance, or affecting another organization will require a scheduling modification record (i.e., AF IMT 2407). The agency requesting the change will initiate the modification record and coordinate it

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				through affected agencies. At a minimum, the Wing Superintendent approves the change to the schedule by signing the record. MAJCOMs develop specific procedures to record and coordinate changes to the weekly schedule.
53	Closed	CDI (R43-10)	Include payload-identification training in munitions training lesson plans. Ensure all munitions personnel are trained.	The 5th Bomb Wing Munitions Squadron developed new Nuclear Surety lesson plan, January 9, 2008. ACC/ Nuclear Weapons Maintenance Branch - A4WN reviewed plan which includes depictions of payload types. All 346 personnel have been trained per new lesson plan.
54	Closed	CDI (R43-02)	Review B-52 Formal Training Unit syllabus to ensure nuclear mission training is accomplished.	Formal Training Unit nuclear training increased—added nuclear ground training, weapons preflight, simulator, and flight. (Implemented with December 10, 2007, Formal Training Unit class)
55	Closed	CDI (R43-03)	Further study of training syllabi in a more comprehensive study.	Formal Training Unit nuclear training increased—added nuclear ground training, weapons preflight, simulator, and flight. (Implemented with December 10, 2007, Formal Training Unit class). A10 Directorate personnel stated that all bomber training syllabi have been reviewed and are on a routine review cycle. Subsequent inspections have shown adequate training and oversight is present
56	Closed	CDI (R43-06)	Review B-52 Weapons School course syllabus to ensure adequate instruction is provided to Weapons School students preparing them to be nuclear weapons subject matters experts.	Weapons Instructor Course has added 1 nuclear sortie, 1 nuclear Weapons System Trainer, 4 ground training courses, and a nuclear weapon preflight. ACC accomplished this item prior to roadmap publication. ACC/A3 acting under Commander ACC direction mandated a review of all B-52 training programs, including the USAF Weapons School. Nuclear specific training is now a part of not only the B-52 Weapons School syllabus but also taught throughout the USAF Weapons School
57	Closed	CDI (R44-02)	Barksdale leadership must make every attempt to develop robust nuclear mission exercise scenarios and ensure at least two nuclear exercises per year in accordance with ACCI 10-450V5 Strategic Committed Aircraft Exercises	Complete. Listed as Complete by HAF. The status of Barksdale has changed since this recommendation was written. Problem/Concerns: 2nd Bomb Wing supports the 5th Bomb Wing for 8010. Exercise details 'requirements have yet to be fully defined (will be defined in the B-52 Concept of Operations) and will also require a significant increase in exercise funding. GLOBAL THUNDER funded, but no other exercises. These requirements will have to be resolved by the 2nd and 5th Bomb Wings, 8th Air Force, Air Combat Command, and A3.

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58	Closed	CDI (R43-05)	Develop a weapons preflight training program to ensure Tech Order procedures and applicable instructions are understood, standardized, practiced, and certified. Special emphasis must be placed on nuclear munitions.	A10 Directorate closed this item after changes made to Formal Training Unit training syllabi adding weapon preflight. Problems/Concerns: Original intent was limited to addressing training at Barksdale. However, Action Officers recognized that issue must also be addressed with the 5th Bomb Wing, 509th Bomb Wing, and USAFE DCA. Propose closing this matrix item and opening a new AFNGOSG Action Item (not matrix) to address these additional AO areas/concerns.
59	Closed	CDI (R20-03)	Personnel Reliability Program (PRP) reinstatement and decertification.	Both Bomb Wing Commanders have reviewed CDI recommendations and after their review, completed those PRP actions they deemed appropriate in response to the incident.
60	Closed	BRR (BRR 35)	Formalize a career development plan for officers, enlisted, and civilians to provide them with the depth and breadth of experience necessary for them to assume leadership positions in the nuclear enterprise.	The Nuclear Enterprise Advisory Panel will work with AF Functional Managers to formalize a career development plan for officers, enlisted, and civilians. These plans will define the depth and breadth of experience necessary for them to assume leadership positions in the nuclear enterprise. AFI 36-2640 (December 18, 2008), paragraph 1.2.7 establishes requirements for Career Functional Managers to provide oversight of career education and training for their respective career field. Additionally, per AFI 36-2640, Career Functional Managers are required to develop/update their respective career field development plan, which provides detailed information (education, training, experience) for each career field. Career Functional Managers are required to utilize an established career path diagram on an annual basis. A1D maintains copies of the career path diagrams. The Nuclear Enterprise Advisory Panel will review career path guidance within the nuclear enterprise No Later Than early CY 2009. AFI 36-2640 describes established process.
61	Open	BRR (BRR 37)	Develop a reliable and easily accessible system to track nuclear experience across the USAF.	The Airman Capability Management (ACM) initiative is designed to deliver a sustainable process for identifying skill requirements (for both nuclear and non-nuclear positions) and identifying associated capabilities within our workforce. Appropriate policy and procedural guidance will be developed based on the results of the pilot effort. The pilot program is scheduled to be operational by December 2009, and additional career fields (officer, enlisted, and civilian) will be

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				<p>incorporated beginning in CY 2010.</p> <p>From AF Personnel Center: Completed building the Nuclear SEI (40 total: 26 have award criteria defined, 14 available for future definition/use). The personnel review to assign SEIs is underway. The pilot program is scheduled to be operational by December 2009, and additional career fields (officer, enlisted, and civilian) will be incorporated beginning in CY 2010.</p>
62	Open	BRR (R43-11)	Assess the frequency and impact of reduction in nuclear training due to demanding conventional requirements in dual-task aircraft units.	<p>Headquarters, Air Combat Command is devising strategy to measure training, evaluation and mission-readiness trends; methodology:</p> <ul style="list-style-type: none"> -- Collect mission-ready (qualification and currency) standards for dual-tasked a/c units -- Conduct trend analysis of training and evaluations; -- Identify any deteriorations in nuclear-mission readiness, -- Assess whether evaluation standards accurately reflect generation and warfighting requirements, -- Are adjustments warranted? Identify resource trade-offs and course of actions. - - -- Will conduct assessment/evaluation after Global Deterrence Force cycles. <p>ACC completed an assessment of conventional requirements and their impact on nuclear readiness prior to publication of the roadmap. Although surge activities associated with spin up training to support Air Expeditionary Forces deployments and actual Air Expeditionary Forces conventional deployments impact availability of nuclear bomber forces, ACC has mitigated this impact with the following: Establishment of the Global Deterrence Force. Programming and planning for activation of a 4th combat coded B-52 squadron (FY 2010). Increase in nuclear training events within the Ready Aircrew Program.</p> <p>Mechanisms are in place to ensure that the Global Deterrence Force and establishment of the 4th B-52 squadron allows for the appropriate leveling of both conventional and nuclear requirements. Until the 4th squadron is fully ready, ACC took additional steps to monitor the status for training bomber forces.</p>

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63	Open	BRR (R35-01)	Develop a sufficient pool of officers with broad experience in intercontinental ballistic missile-related assignments to serve in key missile leadership positions, to include squadron, group, and wing commands.	In Work. AFI 36-2640 enables Career Field Managers and Developmental Trainers to be empowered for career broadening assignments. AF currently tracking this recommendation under roadmap action plan No. 38; therefore, they recommend closing this recommendation.
64	Closed	BRR (BRR 38)	Expand career broadening opportunities (such as missile maintenance, systems engineering, program management, and policy-related assignments) both to retain officers in missiles and develop them for leadership roles in the intercontinental ballistic missile community.	The Nuclear Enterprise Advisory Panel will work with AF Functional Managers and AF/A1 to ensure appropriate career broadening opportunities (such as maintenance, system engineering, program management, and policy related assignments) are in place to develop officers for leadership roles in nuclear enterprise. The updated version of AFI 36-2640 establishes a framework to leverage the Development Team process to identify cross-flow opportunities within career fields based on current and anticipated requirements. The framework to accomplish this activity is in place and the Functional Managers can implement career broadening assignments as necessary. AF/A1 can provide the Nuclear Enterprise Advisory Panel with appropriate data relating to on-going cross-flow utilization as required. The 13S and 21M Career Field Managers have drafted an MOA to formalize the cross-flow process and 31P is exploring options to join them.
65	Closed	BRR (R89-01)	Streamline the presentation of forces to a combatant commander as apportioned by the Joint Staff.	PAD 08-04 places all Intercontinental Ballistic Missiles and nuclear capable bombers under Air Force Global Strike Command. At IOC, AF Global Strike Command will be the component MAJCOM to USSTRATCOM for Global Strike.
66	Open	BRR (R03-03)	Strengthen the relationship with the Defense Threat Reduction Agency by closing gaps in nuclear surety inspection methodology and standardization.	In Work. R03-03 is a sub-set of Roadmap Action Plan 3, improving inspection standardization. SAF/IG, AF Inspection Agency, and MAJCOM IGs have had a great deal of Defense Threat Reduction Agency interaction: - Attended Joint Staff/J39 sponsored 25-1 conference: October 15, 2008 following SAF/IG Nuclear Surety Inspection Process Review; - AF Inspection Agency Oversight team and MAJCOM IG teams worked side-by-side during CSAF-directed Limited Nuclear Surety Inspections ;

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				<ul style="list-style-type: none"> - Defense Threat Reduction Agency included on numerous IG-related policy coordination's; - Defense Threat Reduction Agency provided Subject Matter Experts for Nuclear Surety Inspections inspector course validation; - Defense Threat Reduction Agency and AF Inspection Agency share information on AF personnel assignment recommendations/actions; - DTRA hosting and attending upcoming Nuclear Surety Inspection Process Review Group at their Fort Belvoir Headquarters; - Nuclear Surety Inspection Program minutes distributed to the Defense Threat Reduction Agency; and - Defense Threat Reduction Agency permanent member of Nuclear Surety Inspection Program recommend Closing.
67	Closed	BRR (R93-01)	Restructure Headquarters AF operations staff to form a directorate-level office which is singularly focused on nuclear matters.	<p>Developing alternatives for restructuring the Air Staff to increase visibility and focus of the nuclear enterprise.</p> <p>Way Ahead: decision brief to gain AF Operations, Plans, and Requirements (A3/5), Chief of Staff Air Force(CSAF), SAF approval; socialize concepts with HAF/SAF DCSs, Vice Commander of a Major Command /CCs; build/execute plan to engage with Office of the Secretary of Defense, Joint Staff, Combat Commands, Congress.</p> <p>Construct and execute detailed execution plan fully assessing manpower requirements, personnel actions, facilities, contract implications, communications, and infrastructure.</p> <p>Programming Guidance Letter (PGL) established AF/A10 Directorate to stand up November 1, 2008. Signed PGL attached.</p> <p>Mission Directive 2-Letter coordination complete. Awaiting SAF approval. AF/A10 Directorate UMD approved - AFPC assigning personnel to fill manning requirements (FY09)</p>
68	Open	BRR (R96-07)	Develop and field advanced technology to enhance nuclear surety and security.	In Work. The Air Force stated that they continue to field the latest technologies to enhance nuclear security. Recently, sensor upgrades were completed at F. E. Warren Air Force Base and Malmstrom Air Force Base and construction has begun at Minot Air force base. AF stated that funding for security enhancements was received for U.S. Europe Command Site 5 and was waiting on approval of funding for Site 6. AF stated that AF Space Command has completed installation or Remote Visual Assessment at

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				F.E. Warren and Minot AFB Launch Facilities and is installing the system at Malmstrom AFB through FY 2009.
69	Closed	BRR (R01-3)	Reinforce the primacy of the nuclear mission within the USAF by addressing organizational constructs, providing more robust training, and appropriately resourcing requirements. Communicate these actions to the force from the top down.	Nuclear mission received attention after the Minot-Barksdale and Taiwan incidents. SecAF and CSAF's number one priority; Quarterly Nuclear Oversight Boards (NOBs) co-chaired by SecAF and CSAF; AF Re-organization – Established: AFGSC, AFNWC, AF/A10 Directorate to clarify lines of authority and provide focus; Inspections; inspection team composition, inspector training, no-notice inspections, NSIs, and NORIs; Training and Education: reviewed training requirements from Initial Qualification Training to Monthly Reoccurring Training; Renewed nuclear emphasis in PME. There are two goals contained under Priority 1 of the Air Force Strategic Plan. Improved focus on the Nuclear Mission and to meet recognized benchmarks for nuclear surety. To achieve those two goals, AF established the six strategic objectives and 14 sub-objectives and associated metrics in the Roadmap. Within the Air Force Strategic Plan construct, continual assessment of the identified metrics and objectives will maintain the emphasis on the nuclear mission.
70	Open	BRR (R01-04)	Change the existing AF Nuclear General Officer Steering Group (AFNGOSG) charter to empower the group with appropriate authorities to implement AF-wide nuclear enterprise reforms. AFNGOSG should be chaired by a lieutenant general.	In Work. UNABLE TO CLOSE ON TIME. New ECD: July 31, 2009. Approved by AF/A10 Directorate on July 17, 2009. AFNGOSG was placed in "care-taker status. AF established the Nuclear Issues Resolution and Integration (NIRI) Board, chaired by newly created Assistant Chief of Staff, Strategic Deterrence and Nuclear Integration Directorate (AF/A10). The NIRI Board acts as the single authority with decision-making, overarching management responsibility for oversight, resources, integration, and training. NIRI membership includes AF nuclear MAJCOM/Vice Commander of Major Commands, HAF Deputy Chief of Staffs, and significant mission partners. The inaugural NIRI session was held December 4, 2008. As of April 17, 2009, the NIRI has met three times with central focus on implementing AF-wide nuclear process, and organization and cultural reforms. The NIRI Charter will provide policy directive for institutionalizing the NIRI management construct. The NIRI Charter is in work.

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71	Open	BRR (2.2)	Consolidate responsibilities for conducting Nuclear Surety Inspection into a single USAF NSI team and conduct Nuclear Surety Inspections on a limited- or no-notice basis.	<p>In Work. Phase 1: SAF Staff -directed "IG Way Ahead for Nuclear Inspections." --SAF approved 20-member core team and adjudication of Concept of Operations on March 25, 2009 Phase 2: AF Nuclear Surety Inspections Core Team Concept of Operations and Program Action Directive -- Draft Concept of Operations and Program Action Directive that articulated inspection rules of engagement, milestones, and personnel training and certification requirements. -- AF Nuclear Surety Inspection Core Team Concept of Operations and Program Action Directive completed HAF and MAJCOM/Vice Commander of Major Commands coordination on June 25, 2009. Phase 3: Initial Operations Capability of AF Nuclear Surety Inspection Core Team: - first use of assigned Core Team personnel projected in July 2009 at the 39th Air Base Wing; and determination will be made by the IG. Phase 4: Full Operational Capability of AF Nuclear Surety Inspection Core Team - full operational capability may be declared as early as November 2009 MAJCOMs augment qualified members to Nuclear Surety Inspection Team until Core Team Permanent Change of Station can be accomplished. Expected Resolution Date: Moving ahead under augmentation role. - Initial Operational Capability: projected July 2009. - Full Operational Capability: projected March 2010.</p>
72	Open	BRR (BRR 44)	Evaluate and enforce appropriate exercise guidance in regard to frequency and scale to ensure proficiency.	<p>In Work. UNABLE TO CLOSE ON TIME. (Part 2 of Action Plan). New ECD: July 31, 2009. Approved by AF/A10 Directorate, 17 July 17, 2009. Action Plan is broken down into three separate parts: 1) "AF/A10 Directorate, in coordination with MAJCOMs and Combatant Commands, will review and validate frequency and scale of nuclear exercises". Closed. 2) "Nuclear Operational and Readiness Inspections will execute to the designed operational capability statement. STATUS: SAF/IG is the POC to re-write AFI 90-201, which will cover Nuclear Operational and Readiness Inspections. AFI 90-201 published on June 17 2009 - Closed 3) The AF Vice Chief of Staff will be the</p>

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				waiver approval authority for movement and cancellation of scheduled nuclear exercises. STATUS: Waiver approval authority was discussed at March 13, 2009 Nuclear Issues Resolution & Integration Board meeting. As a result, the authority level initially recommended in this Action Plan was changed from AF/Vice Commander of a Major Command to the MAJCOM Commander and was being coordinated and codified via an Interim Change to AFI 10-204 with proposed completion date of April 22, 2009. Interim Change to AFI 10-204 published on May 19, 2009. Recommend Closing.
73	Closed	BRR (BRR-85)	Publish revised AF Doctrine Document 2-1.5 (nuclear operations doctrine) and include the new version in strategic communication messages designed to reinforce the USAF's commitment to nuclear excellence.	AF Doctrine Document 2-12 - Nuclear Operations was published on April 24, 2009.
74	Closed	BRR (R29-01)	Conduct a USAF-wide PRP survey to identify potential areas for improvements to administrative and training processes while continuing to insist upon strict PRP compliance.	ACC has completed their required actions regarding the PRP survey. A10 Directorate is working on analyzing the survey results and has not yet provided the information back to the MAJCOM. The stand-up of A10 Directorate, establishment of the Global Strike, and Temporary Duties have delayed A10 Directorate's ability to get this information to the MAJCOMs. Worldwide PRP survey conducted November - December 2008. Full results attached; disseminated to AF/A10 Directorate in April 2009 and MAJCOMs in February 2009. Areas identified for training process improvements: - Training presentation: recommend CBT vs. PowerPoint - Improve training for MTF personnel & CCs at non-nuclear units - Revise PRP forms (AF Forms 286/286A) - Require more illustrative training scenarios. Areas identified for administrative process improvements: - Produce more "how-to" checklists to illustrate processes - Units should migrate to an automated method to track PRP status - Clarify inspection checklist requirements - Must establish full time civilian positions at nuclear units to provide PRP continuity .

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				<p>Enduring approaches to address identified improvements:</p> <ul style="list-style-type: none"> - Paid contractor position dedicated to PRP training. - AF Portal web page to host training modules, self-inspection & "how to" checklists - AF Forms 286/286A revised April 2009 with digital signatures. - Engage personnel & medical fields to energize migration to automated systems - Inspection checklist revised to satisfaction of AF Inspection Agency working group - Codify civilian PRP positions in AF nuclear enterprise manning guidance. <p>These improvements produced lasting changes to the AF's PRP processes; they are not one-time efforts whose benefit fades with time. AF/A10 Directorate will continue to enforce strict PRP compliance in every facet of the program via routine and frequent internet-based seminars, annual worldwide conferences, and timely coordinated changes to AF-level guidance.</p>
75	Open	BRR (R89-03)	Conduct a risk assessment of trade-offs between conventional and nuclear taskings and adjust priorities as appropriate.	In Work. This item was closed by ACC prior to publishing the roadmap. ACC accomplished a review of conventional and nuclear mission taskings. As a result nuclear training requirements were increased across the B-2 and B-52 communities. The review further validated that bomber forces would continue to fully support the full range of military operations. ACC has recommended, with ACC/Vice Commander, concurrence that AF/A10 Directorate update the status of the Nuclear Enterprise Management Tool to show this item as closed.
76	Closed	BRR (13.02.01-1 BRR 21)	Require the Nuclear Maintenance Officer's Course syllabus to place stronger emphasis on munitions accountable systems officer duties and responsibilities.	Nuclear Munitions Officer course expanded to include hands on scenarios added to conduct accountable transactions using DIAMONDS. Incorporated AFI 21-204 custody transfer requirements and tech order changes into course. DIAMONDS terminal installed at Sheppard AFB.
77	Closed	BRR (13.04.01-1 BRR 22)	Provide realistic, hands-on Defense Integration and Management of Nuclear Data Services system training to officer and enlisted students attending nuclear munitions courses.	Nuclear Munitions Officer Course expanded and new Nuclear Accountability Course established at Sheppard AFB to include: <ul style="list-style-type: none"> 1) Hands on scenarios added to conduct accountable transactions using DIAMONDS; 2) DIAMONDS terminal installed at Sheppard AFB; 3) Incorporated AFI 21-204 custody transfer requirements and technical order changes into course.

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78	Closed	BRR (13.04-1 BRR 41)	Review the various command-sponsored, nuclear-related courses and determine whether they should remain within each major command or be offered on an enterprise-wide basis.	AFNWC worked with the MAJCOMs/AFNGOSG members, and has incorporated subject/topic matter inputs into AF Course. AFNWC has cataloged available MAJCOM, DOD, and Department of Energy nuclear-related courses. Analysis assessed overlap/redundancy with planned AF Nuclear Management Fundamentals Course. Two courses cover majority of material included in AF Course: Nuclear Munitions Officer Course - taught by Air Education and Training Command for 21A/21M officers, and the 4-day Nuclear Weapons Officer Course taught by the Defense Threat and Reduction Agency. Scope and audience for these courses differ. Nuclear Munitions Officer Course audience largely junior officers who are novices or apprentices in the nuclear enterprise. Nuclear Weapons Officer Course aimed at a student body composed of members from all the services and other government agencies. Hence, the material often includes topics and subjects outside USAF purview or does not focus enough on those areas of concern to the AF. Further, AFNWC identified 10 topical blocks as basis for a 4-8 hour officer Program Element Manager module.
79	Open	BRR (33)	Develop a comprehensive list of all critical nuclear-related USAF billets, in the AF and other agencies, and ensure they are given the highest priority for assigning experienced Airmen.	This task has two parts: identification of a list of billets, and assignment prioritization guidance. Office of Primary Responsibility for part one is A1M, Part of Air Staff-Personnel- Manpower and Organization Division, for the complete listing of billets & then the functional to determine which are “critical.” Office of Primary Responsibility for part two should be functional communities with personnel involved in nuclear ops. AFPC/Director Personnel Assignments makes assignments in accordance with functional/ developmental training prioritization guidance. This guidance would typically be noted in either the Rated Staff Allocation Plan or the Non-Rated Prioritization Plan for each Nuclear Weapons Reconnaissance List officer AF Specialty Code. Since these products are periodically updated, each functional community has the opportunity to direct officer assignment teams regarding community priorities.

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80	Open	BRR (86)	Increase the coverage of nuclear policy, technical, and operational issues at all levels of officer, enlisted, and civilian professional military education.	On track. Stop light chart shows progress as 80 percent complete. Acquired funding for contractor support to finish last 20 percent. Need three full time bodies starting October 2009. Looking for over-hire authority and then bodies to go into the Program Objective Memorandum for out years.
81	Closed	BRR (41)	Fill key billets in the nuclear enterprise with National Technologies Fellowship Program and/or AF Institute of Technology nuclear engineering program graduates.	Office of Primary Responsibility will be AFPC officer assignment teams once the key billets have been identified and prioritization guidance provided by the functional communities/Developmental Teams.
82	Closed	BRR (11)	Conduct a comprehensive review of all USAF guidance and instructions on nuclear-related operations, maintenance, security, and support to ensure clarity and reduce any potential ambiguity. Ensure strict compliance with published regulations and technical data.	<p>A3/5N reviewed list of AF guidance. Compiled List of AF nuclear-related guidance; found 13 out of 123 currently listed under revisions.</p> <p>MAJCOMs and other HAF agencies (Office of Primary Responsibility) to review guidance. Initiated review of nuclear-related guidance and instructions to further refine and clarify task. Compiled a list of nuclear-related guidance. Will task corresponding Office of Primary Responsibility to flesh out list and complete review.</p> <p>List of guidance and instructions will lengthen significantly as each organization will need to review their own publications. Some publications are dated from the 1990's; Office of Primary Responsibilities may no longer exist or were reorganized with new missions.</p> <p>A10-O provides an integration functionality to deconflict guidance between functional communities. The effort is ongoing. Statement added to HAFMD 1-60, ACS for Strategic Deterrence & Nuclear Integration: "A2.1.2.4. Manages a systematic process of conducting recurring, comprehensive reviews of AF guidance and instructions on nuclear-related issues to prevent conflicting policy between AF functional communities."</p> <p>HAFMD 1-60 (draft) uploaded to support closure decision & will be updated while in coordination through final SECAF signature.</p>
83	Open	BRR (R96-01)	Develop and resource a long-range replacement recapitalization program for aging nuclear support equipment.	In Work: AFMC is taking a phased approach due to the enormous scope of this endeavor, and the fragmented management of support equipment. Will solicit for a prioritized list of nuclear support equipment from using MAJCOMs. Drive specific analysis based on priority results; (may be

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				<p>contracted action—ROM for funding forthcoming). Work with /MAJCOMs appropriate program offices on recapitalization & Program Objective Memorandum submissions.</p> <p>Problems/Concerns: Nuclear Certified Support Equipment currently not separately managed. Support equipment is life cycle managed but not for specific assets. Specific analysis will be required. Recapitalization study for nuclear support equipment is currently not in Program Objective Memorandum. Will require lead command sponsorship and additional funding.</p> <p>AFSPC Input: The overall long range replacement recapitalization plan will be documented in an upcoming roadmap from the 526SG. In the meantime, the “Outcome 15 working group” has stood up and is chaired by the Nuclear Weapons Council/CV. Problem 15 was identified by the BRR and both CANS assessments as Inadequate Nuclear Support Equipment that compromises surety. Future: Desired outcome is to have a plan in place that will fix current problems with nuclear support equipment (NSE) and sustain NSE through 2030. AF NWC is standing up a NSE support office and the NWC will likely recommend AF lobby for a congressional insert to sustain NSE through 2030.</p>
84	Closed	BRR (13.02.02-1)	Implement appropriate AFI to require 12-month experience and completion of the Nuclear Maintenance Officer’s Course.	<p>AFI 21-204, as published January 17, 2008, mandates MASO qualifications to include 12-months nuclear weapons maintenance management experience and completion of the Nuclear Maintenance Officer’s Course.</p> <p>In Work: Units are requesting waivers through their MAJCOMs to address MASO qualification issues. Waivers are being approved on a case-by-case basis.</p>
85	Closed	BRR (09.25-01)	Require signatures to document custody transfers as directed in the new revision of AFI 21-204.	<p>AFI 21-204, as published January 17, 2008, requires a custody transfer anytime a warhead/weapon/reentry system is removed from a structure (i.e., igloo, maintenance facility, launch facility, etc.) or when custodial responsibility is transferred between individuals assigned to separate organizations. Individuals conduct face-to-face, physical serial number verifications and ensure personnel receiving custody are an authorized recipient prior to custody transfer. Individuals accepting custody of nuclear weapons sign an AF IMT 504, Weapons Custody Transfer Document.</p>

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86	Closed	BRR (60-BR13)	Evaluate and resource programs in use today, such as "MoveRight" and portal monitors, for potential implementation within the USAF.	Rejected. July 1, 2008. AFNWC visited Pantex on March 24-25, 2008 and reviewed "MoveRight" system. Analysis reveals little applicability to current AF Maintenance processes. "MoveRight" is currently a stand-alone system at Pantex. Pantex is moving towards a PeopleSoft based system with FOC in 2014. Portal monitors are duplicative of AF 504 (custody) process. Current Status: AFNWC working with DTRA on requirements definition.
87	Closed	BRR (09.24.01)	Develop and implement standard scheduling and tracking systems which improve the ability to track locations and status of assigned nuclear weapons and components.	AFI 21-204, IC 2008-1, mandates the use of Munitions Control 2000 (MC2K) for tracking of all munitions/weapons activities. Control boards, notebooks, and status logs will be used for assets that can not be loaded into MC2K. This eliminates the use of home grown databases at nuclear capable units. AFNWC determined NNSA's Move Right system in its current configuration would have little to no value to perform this function. DTRA DIAMONDS program manager indicated DIAMONDS could be modified with a "weapon configuration & location module. A FY 2010 POM input was developed to fund the DTRA program modification.
88	Open	BRR (R96-03)	Develop and field a new payload transporter for missile field convoys.	Prototype of existing Payload Transporter with security mitigators complete in November 2007. Prototype functional checkout at Malmstrom AFB complete in January 2008. Utility evaluation conducted by 576 Flight Line Test Squadron completed in January 2008. In Work: Pursuing funding for lock modification on existing Payload Transporter. Adding remaining security modifications to existing Payload Transporter fleet not feasible due to engineering concerns. FY 2012 Program Objective Memorandum input for Payload Transporter replacement including security upgrades. AFSPC has received 3600 funding (\$1M) starting in FY11. The 3020 follows (\$104.2) with a projected 9 units being provided by the end of FY 2015.
89	Open	BRR (R19-02)	Investigate potential consolidation of resources to minimize variances and reduce vulnerabilities at overseas locations.	In Work. The AF stated that the nuclear enterprise in USFAE is functioning well. As the AF considers the consolidation of resources in Europe, they are obligated to weigh the benefits of burden sharing and having resources at various Host Nation sites. The benefits of dispersed resources and shared responsibility far outweigh the benefit

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				and savings of consolidating the resources in Europe. Continue to ensure Host Nations of US support for the NATO Dual Capability Aircraft mission. Recommend Closed.
90	Open	BRR (R96-05)	Develop a long-range enterprise plan to reduce waivers through prioritized funding and resourcing.	In Work. The Annual Nuclear Deviation and Remediation report requires detailed funding actions for temporary deviations entering their second year. The CY 2009 report and future reports will coincide with the AF Corporate structure and identify funding shortfalls not addressed by the nuclear MAJCOMs. In addition, upon completion of the AF Nuclear Weapons Security Analysis of Alternatives, solutions sets will be identified for our most vulnerable nuclear environments. (AF stated that they documented 56 deviations in 2008, down from the 79 deviations reported in the BRR.)
91	Open	BRR (R96-04)	Field a replacement helicopter as well as field and fully fund sustainment of the remote visual assessment.	Remote Visual Assessment 3020 is funded through 2013 which will provide one configuration and full operational capability. AFSPC is spearheading the requirements process for the Air Force's Common Vertical Lift Program and received validation from the Air Force Requirements for Operational Capabilities Council. AF has given \$4.3 million on FY 2009 for the Special Program Office stand-up and 8 Common Vertical Lift Program aircraft are funded in the FY10 Program Objective Memorandum. Joint Capabilities Integration Development System. STATUS: Full Capability Board completed February 25, 2009, Joint Capability Board and Joint Requirements Oversight Council for ACAT 1D interest occurred in April 2009 & Office of the Secretary of Defense directed Material Development Decision occurred in MAY 2009. Remote Visual Assessment 3400 is funded through 2015. Common Vertical Lift Program IOC may be slipped two years in the FY 2011 APOM. Currently at the AF board for deliberation.
92	Open	BRR (R95-01)	Examine current organizational construct and process integration supporting the nuclear mission area and provide potential alternatives for improvement.	UPDATE: creation of the A10 Directorate, stand-up of Air Force Global Strike Command (P), the fourth B-52 squadron, and AFNWC mission set/unit consolidation. An AF Nuclear Enterprise roadmap has been developed that contains action plans to correct many of the deficiencies identified during the many reviews of the Air Force Nuclear Enterprise. The roadmap: <ul style="list-style-type: none"> • lays out an action plan to correct

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				<p>what the AF has identified as root - causes; and</p> <ul style="list-style-type: none"> provides a direct reporting link of nuclear enterprise-level performance metrics that are reported to the SAF and CSAF as co-chair of the Nuclear Oversight Board: this board is comprised of the top general officers in the AF nuclear enterprise.
93	Closed	BRR (30 BRR 29)	Review logistics composite models to determine if the challenges dual-tasked and prime nuclear airlift force units face in maintaining current mission qualifications and certifications (nuclear and conventional) are adequately reflected in each AF manpower standard.	Reviewed LCOM for each weapon system to ensure it has been based on the WMP-5 and performed desktop analysis of WMP-5 and peacetime taskings. Performed Analysis of Alternatives (AoA) for each weapon system to validate. Completed AoAs for all CAF (B-1, B-2, B-52, F-15C/D/E, F-16, F-22, and A-10). LCOM requirements support dual-mission requirements. Completed AoA for PNAF tasked unit. Determined additional manpower probably due to team integrity, additional training, certification, and aircraft preparation requirements. Identified corrective action: requirements must be quantified, validated, and submitted to AFCS. Recommend follow up tasking for this purpose.
94	Open	BRR (29)	Review medical manpower requirements at bases with large Personnel Reliability Program populations to determine if adequate manpower requirements are documented and resourced.	<p>Pending technical solution assessment. Capability exists within Military Personnel Data System to record/monitor SEIs. Classification change proposals originate with Functional Authority/Career Field Manager and submitted to AF Personnel Center for consideration and processing for implementation in an upcoming quarterly cycle. Problems/Concerns: No formalized medical manpower standard.</p> <p>*AF Personnel Center Processing, Air Staff coordination, and all other actions required determine appropriate implementation cycle.</p> <p>*If Functional Authority Career Functional Managers development, coordination, and submission process completed by June 1, 2008, new SEIs available February 1, 2009.</p>
95	Open	BRR (28 BRR 10)	Assess nuclear mission career fields to ensure program budget decision reductions were appropriately targeted and left no seams in enterprise support.	In Work. UNABLE TO CLOSE ON TIME. (All AF actions are complete, need approval of the budget before closure). New ECD: May 30, 2009. Approved by AF/A1 on April 23, 2009. AF stated that they have funded all identified Nuclear shortfall (~2.5K billets) in the FY 10 President's Budget. The AF was awaiting the approval of the FY 2010 President's Budget by the new administration. A1 claims their actions are complete. FY 2010 President's Budget signed in May

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				2009 to include funding for the ~2,500 new nuclear billets Recommend Closed on behalf of AF/A1. Concern: The statement above does indicate whether the AF-wide Program Budget Decision 720 cuts will be revisited.
96	Closed	BRR (R96-02)	Ensure nuclear weapon movement support systems receive sufficient funding to execute all required stockpile adjustments.	Complete: AFNWC worked with AFMC/ Logistics Support Office to receive additional funding to satisfy requirements for all FY 2008 nuclear weapon movements (Program Budget Decision 725, Munitions Consolidation, Service redeploy, Nuclear Posture Review retrograde, outside Continental U.S. swaps). In Work: AFNWC working with the Second Destination Transportation - Air Staff Logistics AF/A4PY (now A4PS Sustainment Branch,) to use centrally-managed funds to provide for the movement of AF materiel. The Program Element Manager, who incorporated AFNWC Second Destination Transportation requirements into Nuclear Support Unfunded Priority List for the Fiscal Year Defense Program. Problems/Concerns: None for FY 2008. Future FYs in doubt until execution year.
97	Closed	DSB (09.26.5 DSB 09)	Re-establish that the Wing Commander is the approved authority for any movement of nuclear weapons or nuclear-capable cruise missiles on the installation outside the nuclear weapons storage area.	AFI 21-204, as published January 17, 2008, continues to require Wing Commanders to authorize all nuclear weapons movements outside a restricted area. ACC/A3 developed ACCI 10-450, Volume 5 to address movement procedures for strategic weapons ferry missions requirements (i.e. Tactical Ferry).
98	Closed	DSB (09.26-6 DSB 10)	Re-establish formal change of custody requirements for any movement of nuclear-capable cruise missiles outside the weapons storage area to include serial number verification, and custody change documentation using a formal document signed at each change of custody.	AFI 21-204, as published January 17, 2008, requires a custody transfer anytime a warhead/weapon/reentry system is removed from a structure (i.e., igloo, Protective Aircraft Shelter, maintenance facility, launch facility, etc.) or when custodial responsibility is transferred. Individuals conduct face-to-face, physical serial number verifications and ensure personnel receiving custody are an authorized recipient prior to custody transfer. Individuals accepting custody of nuclear weapons sign an AF IMT 504, Weapons Custody Transfer Document.
99	Closed	DSB (09.26-7 DSB 11)	Direct that nuclear weapons not be stored in the same facility with nonnuclear munitions and missiles to include nuclear capable cruise missiles	AFI 21-204, as published January 17, 2008, mandates that units will not comingle nuclear and non-nuclear munitions (i.e., trainers, test assemblies, tactical ferry payloads, etc.) in the same storage structure. Only as a last resort and with MAJCOM/A4W explicit approval

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			with payloads other than nuclear warheads.	may assets be comingled. All non-nuclear munitions items will be identified using stanchions/cones, ropes, and placards to ensure there is a clear distinction between nuclear and non-nuclear munitions.
100	Open	DSB (25 DSB 04)	Require that Nuclear Operational Readiness Inspections include comprehensive evaluations of all tasks required to generate the full rapid response nuclear bomber force commitment for the inspected unit and supporting activities outside the unit to include tanker support.	<p>In Work. Office of Primary Responsibility changed from "MAJCOMs" to SAF/IG on February 23, 2009.in accordance with the February 18-19, 2009, Nuclear Weapons Group recommendation. Previous MAJCOM status reports summarized in February 23, 2009 Status Report.</p> <p>Phase 1: Set Nuclear Operational and Readiness Inspection requirements in policy (AFI 90-201, Inspector General Activities)</p> <p>--AFI 90-201 published June 17, 2009</p> <p>Phase 2: Schedule Nuclear Operational and Readiness Inspection Conference with applicable MAJCOMs (25-27 August 25-27, 2009):</p> <p>-- Review Nuclear Operational and Readiness Inspection requirements;</p> <p>-- Develop processes among all MAJCOMs for ensuring robust NORI scenarios;</p> <p>-- Validate requirements & process with COCOM;</p> <p>-- Address and mitigate any Air Reserve Component concerns; USAFE credit; and</p> <p>-- Assign points-of-contacts to develop Memorandums of Understanding and Memorandums of Agreements between IGs for Multi-MAJCOM inspections.</p> <p>Phase 3: Re-evaluate plan and revise as necessary.</p>
101	Closed	DSB (R24-02 DSB 05)	Direct that the AF dedicate the full rapid response commitment to the nuclear mission on a continuous basis, rotating the commitment among the B-52 squadrons. During the rotation to the nuclear commitment, the unit would be OPCON to Task Force 204 (the AF nuclear bomber component to U.S. Strategic Command) and would focus on training for the nuclear deterrent mission.	Recommendation tasks SECDEF. ACC has established the GDF to provide forces appropriate to mission. USAF lacks the authority to force OPCON of these forces from USJFCOM to TF204 and it would be inappropriate for ACC to so advocate.
102	Closed	DSB (not tracked in NEMT)	The Secretary of the Air Force should direct the consolidation of existing AF technical organizations	In March 2008, the Under Secretary of Defense for Acquisition, Technology, and Logistics responded to the DSB disagreeing with the recommendation. Office of the

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			into a single technical organization (using Navy SSP as a model) reporting directly to the CSAF, led by a Major General that has full responsibility and accountability within the AF for, and only for, nuclear systems and procedures.	Secretary of Defense considers this action closed (not to be implemented).
103	Open	DSB (R91-01 DSB 06)	Ensure that Task Force 204 has the needed authorizations and is fully manned to meet the full rapid response nuclear commitment.	In Work. The AF stated that this action has two main elements. The first, providing billets to increase the size of Task Force 204 was accomplished by ACC by moving 26 total billets from existing management headquarters authorizations to 8th AF/Task Force 204. That part closed in Jan 2009. The second element, providing people to fill the billets is currently red. AFPC has not prioritized any fills for Task Force 204 and in fact has identified members already in place for Permanent Change of Station actions that further reduce the manning levels in this organization. ACC has taken steps to code the Task Force 204 positions as "nuclear critical" but to date the AF has seen no positive moves towards that goal. Without AFPC assistance, Task Force 204 manning will decline to 20% of authorized this summer. Update: Summer 2009 assignment actions improved the position of Task Force 204 however the goal of 100 percent manning may not be achievable. ECD: July 1, 2010.
104	Closed	DSB (36 DSB 03)	Ensure that nuclear career fields, enlisted, and officer, remain viable and adequately manned to provide a continuing "no defects" culture within the nuclear enterprise.	A1 analyzed the viability and manning of the nuclear enterprise Air Force Specialty Codes. A1 considers the bomber pilots (11B), bomber navigators (12B), space and missile (13S), munitions and missile maintenance (21M), and security force (31P) officers Air Force Specialties; and the command post (1C3), missile and space systems electronics maintenance (2M0X1), missile and space systems maintenance (2M0X2), missile and space facilities (M0X3), munitions systems (2W0X1), aircraft armament systems (2W1X1), nuclear weapons (2W2X1), and security forces (31P0X1) enlisted Air Force Specialties to be within the nuclear enterprise. All Air Force Specialty current authorization structures are sustainable except for: space and missile (13S), munitions and missile maintenance (21M), and security force (31P) officers. The space and missile (13S) and security forces (31P) grade

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				structures are slightly field grade officer heavy and require careful management to ensure they can meet overall requirements without having significant grade mismatches. The missile maintenance (21M) Air Force Specialty Code is moderately field grade officer heavy and will likely have to down grade some field grade officer positions or accept more pronounced grade mismatches. Any manpower additions to that career field need to be split between command grade officers and field grade officer grades. All Air Force Specialties have acceptable permanent party manning except for bomber, and command post (1C3) personnel. The command post (1C3) issues have a planned fix for FY 2010 where the AF will increase accessions and re-training into that Air Force Specialty. The pilots (11B) and bomber navigators (12B) manning shortages are part of a larger rated force management issue. The Air Force stated that they continue to support rated bonuses, rated recall, and maximum pipeline production to improve the situation. Functional prioritization plans are vital for all Air Force Specialties. Enlisted career fields were briefed at February 6, 2009, Nuclear Enterprise Advisory Panel meeting and the Officer career fields were briefed at March 12, 2009, Nuclear Enterprise Advisory Panel meeting. The Air Force will address further manning and sustainability issues via their normal force management processes.
105	Closed	DSB (R93-02 DSB 12)	Establish an office within A-3/A-5 in the Air Staff headed by a flag/general officer whose daily business is the nuclear enterprise.	Programming Guidance Letter established AF/A10 Directorate stood up. Mission Directive, two-letters for coordination completed. AF/A10 Directorate Unit Manning Document approved - AFPC assigning personnel to fill manning requirements (FY 2009).
106	Open	DSB (R89-02 DSB 07)	Commander of ACC should ensure that the 8th AF has the full resources, authority, and accountability for daily B-52 operations – nuclear and conventional.	In Work. OPEN. Commander of ACC directed and ACC/A1 executed the transfer of officer and enlisted positions from the MAJCOM management Headquarters account to the 8th AF (specifically 608 Strategic Operations Squadron) Unit Manning Document to ensure full resources. AFPC is filling billets through the normal assignment process. Commander ACC reiterated the authority and accountability inherent in the 8th AF/Commander position as Numbered AF commander. An associated task in this recommendation

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				concerned operational control of bomber forces in a day-to-day state. The U.S. AF and the ACC have no authority to force U.S. Joint Forces Command to delegate operational control of any forces to an 8th AF or U.S. Strategic Command Task Force. Item submitted to Senior Reviewer. Air Force recommends closing.
107	Closed	DSB (R43-04 DSB 08)	Commander of ACC should direct that the B-52 initial training courses at Barksdale and the B-52 Weapons School course include flight training in the nuclear mission.	ACC/A3 under COMACC guidance directed both the B-52 Formal Training Unit and Weapons School to add flight training to the syllabi for B-52 crews prior to publication of the roadmap. We have now had three review cycles that have validated the level of flight training in B-52 courses. Accomplished prior to roadmap publication.

ACRONYMS used in this TABLE

2R1	Maintenance Schedule
2W2X1	Nuclear Weapons Enlisted Technician Air Force Specialty Code
21A	Aircraft Maintenance Officer Air Force Specialty Code
A1M	Part of Air Staff-Personnel- Manpower and Organization Division
A3/5	Air Force Operations, Plans, and Requirements
A3/5N	Air Force Operations, Plans, and Requirements Nuclear
A3S	Part of Air Staff Operations- Strategic Operations Division
A10	Headquarters, Air Force, Strategic Deterrence and Nuclear Integration Directorate
ACC	Air Combat Command
ACCI	Air Combat Command Instruction
AFI	Air Force Instruction
AF/A1	Air Force Manpower, Personnel, and Services
AFMC	Air Force Materiel Command
AFNGOSG	Air Force General Officer Steering Group
AFNWC	Air Force Nuclear Weapons Center
AFSPC	Air Force Space Command
BRR	Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures
CC	Commander
CDI	Commander Directed Report of Investigation Concerning an Unauthorized Transfer of Nuclear Warheads between Minot AFB, North Dakota and Barksdale AFB, Louisiana
CSAF	Chief of Staff Air Force
DSB	Defense Science Board Report on the Unauthorized Movement of Nuclear Weapons
ECD	Estimated Completion Date
DIAMONDS	Defense Integration and Management of Nuclear Data Services
HAF	Headquarters, Air Force
IG	Inspector General
IMT	Information Management Tool
JCB	Joint Capability Board
MAJCOM	Major Command
MASO	Munitions Accountable Systems Officer
NIRI	Nuclear Issues Resolution and Integration

PRP	Personnel Reliability Program
SAF	Secretary of the Air Force
SEI	Special Experience Identifier
IG	Inspector General
USAF	U.S. Air Force
USAFE	U.S. Air Force Europe

Appendix C. Criteria Revised

The following Table identifies the Air Force Instruction and Air Force Technical Order that were revised to address the Findings in the CDI, BRR, and DSB reports.

Table 3. Revised Instructions and Technical Orders

<i>Rec. No.</i>	<i>Source</i>	<i>Status</i>	<i>Policy No</i>	<i>Paragraph No.</i>
1	CDI	Closed	AFI 21-204	Para. 4.1.1, pg. 51
3	CDI	Closed	AFI 21-204	Para. 9.2, pg. 103
8	CDI	Open	AFI 90-201	Para. 3.3.1.1.2, pg. 21
9	CDI	Closed	AFI 90-201	Para. 3.3.1.1.2, pg. 21,
10	CDI	Closed	AFI 21-204	Para. 1.4.14, pg. 27
11	CDI	Closed	AFI 21-204	Para. 1.4.14.6.5.1, pg 28,
12	CDI	Closed	AFI 21-204	Para. 1.4.14, pg. 27
13	CDI	Closed	AFI 21-204	Para. 1.4.14.6.5.1, pg. 28,
			AFI 21-204	Para. 1.4.14.6.5.1. pg. 28
14	CDI	Closed	ACCI 21-165	3.7.1.2., pg.21
15	CDI	Closed	ACCI 21-165	Para. 4.3.4.4, pg. 28
16	CDI	Closed	AFI 21-204	Para. 1.4.14.6.6, pg. 28
18	CDI	Closed	ACCI 36-211	Para. 5.4
22	CDI	Closed	AFI 21-204	Para. 9.1.2, pg. 102
24	CDI	Open	AFI 21-204	Para. 9.1.2, pg. 102
26	CDI	Open	AFI 21-204	Para. 9.1.7, pg. 102
27	CDI	Closed	AFI 21-204	Para. 9.1.2, pg. 102
31	CDI	Closed	AFI 21-204	Para. 9.1.2, pg. 102
			Technical Order	
32	CDI	Closed	1B-52H-16	I.40, pg. 1-75
			Technical Order	
32	CDI	Closed	1B-52H-16CL	Chapter 7 "I", pg. 7-1
35	CDI	Closed	AFI 21-101	Para. 8.2.1.1, pg. 190
				Para. 1.4.6.1, pg. 16,
				Para. 2.3.1.13, pg. 34 &
37	CDI	Closed	AFI 21-204,	Para. 2.4.1, pg. 37
			ACCI 36-2201	
	CDI	Closed	(v3)	Attachment 1, pg 52
38	CDI	Closed	Technical Order	2nd Para., pg. 2-4,
			1B-52H-30-4	
39	CDI	Closed	ACCI 10-450 (v2)	Para. 3.5.3, pg. 21
40	CDI	Closed	AFI 11-2B-52 (v1)	Para. 3.5, pg. 22
			Technical Order	
41	CDI	Closed	1B-52-H-30-1	pg. 2-8
43	CDI	Closed	AFI 21-204	Para. 1.4.14, pg. 27
44	CDI	Closed	AFI 21-204	Para. 3.1.23, pg. 47
				Para. 1.4.14.6.5.1 &
46	CDI	Closed	AFI 21-204	Para. 1.4.14.6.6, pg. 28
			5 Munitions	
			Instruction 21-	
46	CDI	Closed	1650	Para 1.2.1

			AF Information Management Tool No. 2407 (AFI 21-	
49	CDI	Closed	204)	Para. 1.4.14.6.5.1, pg. 28,
50	CDI	Closed	AFI 21-204	Para 1.4.14.6.6, pg. 28
51	CDI	Closed	AFI 21-204	Para 1.4.14.6.6, pg. 28
52	CDI	Closed	AFI 21-204	Para 1.4.14.6.6, pg. 28
60	BRR	Closed	AFI-36-2640	Para. 1.2.7
				Para. 8.5.1.1.1
76	BRR	Open	AFI 21-204	Para. 8.5.1.1.2, pg. 73,
84	BRR	Closed	AFI 21-204	Para. 8.5.1.1.2, pg. 73
85	BRR	Closed	AFI 21-294	Para. 9.2.2.2, pg. 103
97	DSB	Closed	AFI 21-204	Para. 1.4.1.1.10.
98	DSB	Closed	AFI 21-202	Para. 9.1.7.1
99	DSB	Closed	AFI 21-204	Para. 4.1.1

The following is a description of the revisions to the instructions and technical orders in Table 3.

**Air Force Instruction 21-204, “Nuclear Weapons Maintenance Procedures,”
January 17, 2008**

Paragraph 1.4.1.1.10. Authorize all nuclear weapons movements outside a restricted area. Nuclear weapons will not be moved outside a restricted area during hours of darkness or in severe weather conditions unless necessary to meet mission requirements.

Paragraph 1.4.6.1. Review and coordinate on all plans, training, and programs that affect nuclear surety in accordance with Air Force Instruction 91-101, Air Force Nuclear Weapons Surety Program.

Paragraph 1.4.8.34. Conduct production meetings to discuss current and upcoming workload with section personnel.

Paragraph 1.4.12. Munitions Accountable Systems Officer. A single individual who oversees all aspects of the daily accountability and custody of the unit’s nuclear weapons stockpile. The Munitions Accountable Systems Officer executes the accountable officer and custodian responsibilities identified in 11N-100-4, “Custody, Accountability, and Control of Nuclear Weapons and Nuclear Material.” Munitions Accountable Systems Officer’s will:

Paragraph 1.4.12.17. Develop and maintain organizational “Commanders Account Responsibilities” briefing and provide organizational commander briefings as requested.

Paragraph 1.4.14. Munitions Plans & Scheduling. Single point of contact for developing, coordinating, publishing, and distributing maintenance schedules. Additionally, Plans and Scheduling tracks work order completion, manages delayed discrepancy listing, awaiting maintenance, awaiting parts, and Time Compliance Technical Order programs, and in the event of scheduling conflicts, assigns priorities. This function may be decentralized as determined by Maintenance Supervision.

Paragraph 1.4.14.6.5.1. Any change to the approved weekly schedule affecting major maintenance actions, Protection Level One[♦], asset maintenance (i.e., limited life component exchange, alteration, etc.) or affecting another organization will require a schedule modification record (Air Force Information Management Tool 2407). The agency requesting the change to the weekly schedule initiates the schedule modification record and coordinates it through the affected agencies. At a minimum, the maintenance superintendent approves the change to the schedule by signing the record. MAJCOMs will develop specific procedures to record and coordinate changes to the weekly schedule.

Paragraph 1.4.14.6.6. Serve as the primary point-of-contact for the daily production meeting. At a minimum, the following items will be covered during the meeting: Trained, qualified, certified personnel availability, support equipment, vehicle, test, and handling equipment availability and serviceability, supply and spares availability, and status of previous day's maintenance activities that may impact upcoming activities.

Paragraph 2.3.1.13. Nuclear Weapons Maintenance Training Program. Include as a minimum the master training plan, lesson plans, Air Force Information Management Tool 2435, Load Training and Certification Documents, and Career Field Education and Training Plans.

Paragraph 2.4.1. General. Certification, as used here, is a term that applies to nuclear weapons related tasks. The certification program is a requirement over and above the qualification and certification procedures contained in Air Force Instruction 36-2201,v3, "Air Force Training Program on the Job Training Administration," December 20, 2006, and takes precedence over all other publications in the area of weapons certification and evaluation. Trainers will use the Career Field Education and Training Plan, lesson plans, and applicable technical orders to Job Qualification Standard qualify individuals on certifiable tasks. Individuals will be Job Qualification Standard task qualified prior to task certification and the certification is limited to those items for which the individual is qualified. The objective of the certification program is threefold: to ensure initial certification is conducted using training weapons; to ensure non-certified individuals are not permitted to perform nuclear weapons tasks (handle, store, maintain, inspect, and mate and demate operations) on war reserve weapons; and to ensure individuals performing nuclear weapons tasks use proper technical data, maintenance procedures, and techniques. MAJCOMs will identify additional weapons system specific certifiable tasks in addition to the tasks listed in paragraph 2.5.

Paragraph 3.1.23. All nuclear weapons maintenance operations will be performed by Nuclear Weapons Enlisted Technician Air Force Specialty Code (2W2X1) personnel. 2M0XX or 2WXXX personnel will perform all nuclear weapons handling operations. In circumstances where not enough 2M0XX or 2WXXX personnel are available to perform the required nuclear weapons handling operations, the Major Command will designate the Air Force Safety Center to augment assigned 2M0XX or 2WXXX personnel.

[♦] USAF resources for which loss, theft, destruction, misuse, or compromise would result in great harm to the U.S.

However, there must be core 2W/2M personnel assigned and available to manage and oversee the nuclear handling operations. In addition to Air Force Safety Center requirements, all training; security clearance; Personnel Reliability Program requirements; and certification requirements are applicable.

Paragraph 4.1.1. Store nuclear weapons only in approved structures and configurations. Do not commingle nuclear and non-nuclear munitions/missiles (i.e., TYPE trainers/shapes, joint test assemblies, training/ferry payloads, empty missiles/ containers, Conventional Air Launched Cruise Missile/Air Launched Cruise Missile Test Instrumentation Kits (CATIK, etc.) in the same storage structure, cell, or Weapons Storage and Security System. Only as a last resort and with Major Command/A4W, or equivalent, approval may assets be co-mingled. All non-nuclear munitions/missiles will be identified using stanchions/cones, ropes, and placards to ensure there is a clear distinction between nuclear and non-nuclear munitions/missiles. Placards must indicate “Trainer”, “Empty”, “JTA”, or “CATIK”, as applicable.

Paragraph 8.5.1.1.1. MASO Requirements for Nuclear Accounts. Must be a 21M Munitions and Missile Maintenance Officer or a permanent civil servant (GS-11 equivalent or above) physically assigned to the munitions organization. He or she must possess appropriate security clearance, be PRP certified (Critical), and be a US citizen. Mandatory qualifications include 12-months nuclear weapons maintenance management experience and completion of the Nuclear Maintenance Officer’s Course. Personnel with an assignment to an overseas account who have not attended Nuclear Maintenance Officer’s Course should receive enroute training.

Paragraph 8.5.1.1.2. MASO Requirements for Nuclear Accounts without WR Weapons. Must be a 21M Munitions and Missile Maintenance Officer, a senior Non-Commissioned Officer in Air Force Safety Center 2WXXX, or a permanent civil servant (GS-9 equivalent or above) physically assigned to the munitions organization. He or she must possess appropriate security clearance and be a US citizen. Mandatory qualifications include 12-months munitions maintenance management experience and completion of the Nuclear Maintenance Officer’s Course.

Paragraph 9.1.1. While in storage the MASO retains custody of nuclear weapons. The Munitions Accountable Systems Officer authorizes access to key and lock or module teams by signature on the Weapons Storage Area Authorization List /Access Approval Authority Listing or Air Force Information Management Tool 2586, Unescorted Entry Authorization Certificate, prior to commander approval.

Paragraph 9.1.2. The Wing Commander designates positions by title that are authorized to receive custody of nuclear weapons. Unit commanders designate individuals to fill positions authorized to receive custody of nuclear weapons or warheads. The letters of authorization must be sent to the MASO. Additionally, the Weapons Storage Area Authorization List/Access Approval Authority List may be used to identify munitions personnel authorized to receive custody of nuclear weapons or warheads inside maintenance and storage areas.

Paragraph 9.1.7. Custody Transfers. Custody transfer is required anytime a warhead/weapon/reentry system is removed from a structure (i.e. storage igloo, protective aircraft shelter maintenance facility, launch facility, etc.) or when custodial responsibility is transferred between organizations (i.e., operations squadron to maintenance squadron or vice versa, etc.). Individuals will conduct a face-to-face, physical serial number verification and ensure personnel receiving custody are an authorized recipient prior to custody transfer. Individuals granted unescorted entry to intercontinental ballistic missile launch facilities/limited life components through the Missile Entry Control System are authorized recipients of custody transfer, and shall use a valid entry authentication using Missile Electronic Encryption Device in lieu of face-to-face verification. The face-to-face serial number verification must be accomplished by an authorized two-person team with both members (individual relinquishing custody, individual gaining custody) verifying the serial number and source document.

Paragraph 9.1.7.1. Intra-area movements of Nuclear Weapons to and from Storage Structures, Shelters, or Maintenance Facilities are covered in paragraph 9.2.1. Movements between maintenance bays/cells are not considered an intra-area movement.

Paragraph 9.2. Custody Transfer Documentation. Approved work orders will be used to control all movements and will be accompanied by Air Force Information Management Tool 504s to document custody transfers. The MASO will perform an audit, in conjunction with an appointed audit officer, of all completed transfer documents during the semi-annual inventory required in TP 100-3150.

Paragraph 9.2.2.2. Subsequent transfers will be conducted using face-to-face, physical serial number verification procedures and by confirming individuals are authorized to accept custody prior to documenting the custody transfer on the Air Force Information Management Tool 504.

Air Force Instruction 21-101

Paragraph 8.2. **QA Responsibilities.** Quality Assurance is responsible to the Maintenance Group Commander to perform as the primary technical advisory agency for maintenance and assists work center supervisors in managing the maintenance effort. Quality Assurance personnel will:

Paragraph 8.2.1. Implement and administer the Maintenance Standardization & Evaluation Program and other programs to include:

Paragraph 8.2.1.1. Activity Inspections (as Major Command directed)

Air Force Instruction 90-201, "Inspector General Activities," November 29, 2004

Paragraph 3.3.1.1.2. Units may be selected at the discretion of the Major Command IG to receive a minimum-notice inspection that will key on a unit's ability to perform its nuclear surety mission. Notice will be sent by message to units with information copies to SAF Inspector General/Inspections Directorate; HQ Air Force Inspection Agency/Inspections and Oversight; Headquarters Air Force Specialty Code/Weapons

Safety Division – SEW; Headquarters U.S. Air Force/Special Experience Identifier; Headquarters U.S. Air Force/Air Staff Operations-Strategic Operations Division N; Headquarters U.S. Air Force/Security Forces - A7S; and Headquarters U.S. Air Force, Aircraft Maintenance – A4M.

Air Combat Command Instruction 21-165, Combat Air Force: “Aircraft Flying and Maintenance Scheduling Procedures,” April 22, 2008

Paragraph 3.7.1.2. The Wing Commander will chair a weekly scheduling meeting at which the Operations Group and Missile Maintenance Group will attend. The flying and maintenance plan will be presented for approval. Maintenance Operations Flight Plans, Scheduling, and Documentation ensures a completed (paper or electronic) copy is submitted to the Wing Commander (or equivalent) at the weekly scheduling meeting.

Paragraph 4.3.4.4. Aircraft configuration is changed after approved Pen-and-Ink submissions via AF Form 2407. These changes will be tracked locally to prevent a re-occurrence and get a true picture of the total scheduling turmoil.

Air Combat Command Instruction 36-211, Air Combat Command Squadron Commander and Chief of Safety Hiring and Tenure,” May 28, 2009

Paragraph 5.4. Flying squadron, operations support squadron, aircraft maintenance squadron, nuclear munitions squadron, and security forces squadron commanders, whose organizations have a nuclear mission, require commanders of these squadrons to attend the Air Force Nuclear Management Fundamental Course and other specified nuclear commander courses prior to assuming command/duties. The course is also highly encouraged for communications and civil engineering squadron commanders at affected installations.

Air Force Instruction 11-2B-52 (v1)

Paragraph 3.5. Transferring Between Units. Basic Mission Capable or Combat Mission Ready individuals transferring between units will complete Mission Qualification Training as determined by the gaining unit squadron commander. Training should be based on experience, proficiency, currency, and previous formal training of the transferring individual. If the gaining unit's assigned weapons are different, accomplish Weapons/Tactics academics as required. Basic Mission Capable or Combat Mission Ready individuals transferring between units must complete the Unit Mission Briefing covering all assigned Designed Operational Capabilities. Additionally, for dual tasked units, crew members must also complete all the Nuclear Functional Training in Aircrew Ground Training Requirements Table.

Air Force Instruction 36-2640, “Executing total Force Development,” December 16, 2008

Paragraph 1.2.7. Identify institutional competency expectations to facilitate FD decisions through deliberate utilization of the Institutional Competency List.

Technical Order 1B-52H-16 (change 1), “Weapons Loading Procedures,” April 17, 2009

Prior to commencing a loading operation, the status of the aircraft controls, switches, and circuit breakers (other than monitor and release systems) will be verified by the aircraft crew chief or assistant.

Technical Order 1B-52H-30-4, “Aircrew Weapon Delivery Manual,” May 12, 2008

Tactical Ferry. For tactical ferry, aircraft evacuation/deployment, or recovery of an airborne alert aircraft, accomplish all normal procedures from Before Exterior Inspection through Step 3E of the After Engine Start checklist and all of the Prelanding Procedures and After Landing Procedures.

Exterior Inspection - Pylons: A minimum of two authorized persons, each capable of detecting incorrect or unauthorized procedures with respect to the task to be performed and familiar with pertinent safety and security requirements, will be present during any operations affording access to the weapons system. The inspection crew is required to check view ports on each individual missile to ensure proper payload is installed for the mission. The payload will be marked with “nuclear” for an operational payload or “Training/Ferry” for a Training/Ferry/Payload, Operational Test Launch, and Joint Test Assembly payloads. When missiles are aboard, check the Air Force Technical Order Forms 781 for an entry indicating a weapons preflight has been accomplished. If preflight has not been accomplished and regardless of missile payload, two weapons qualified personnel must preflight all pylons and pylon missiles prior to aircraft acceptance and annotate completion of missile preflight to include payload type verification.

Exterior Inspections. If preflight has not been accomplished and regardless of missile payload, two weapons qualified personnel must preflight all pylons and pylon missiles prior to aircraft acceptance and annotate completion of missile preflight to include payload type verification and status in AFTO Forms 781.



Inspector General Department *of* Defense